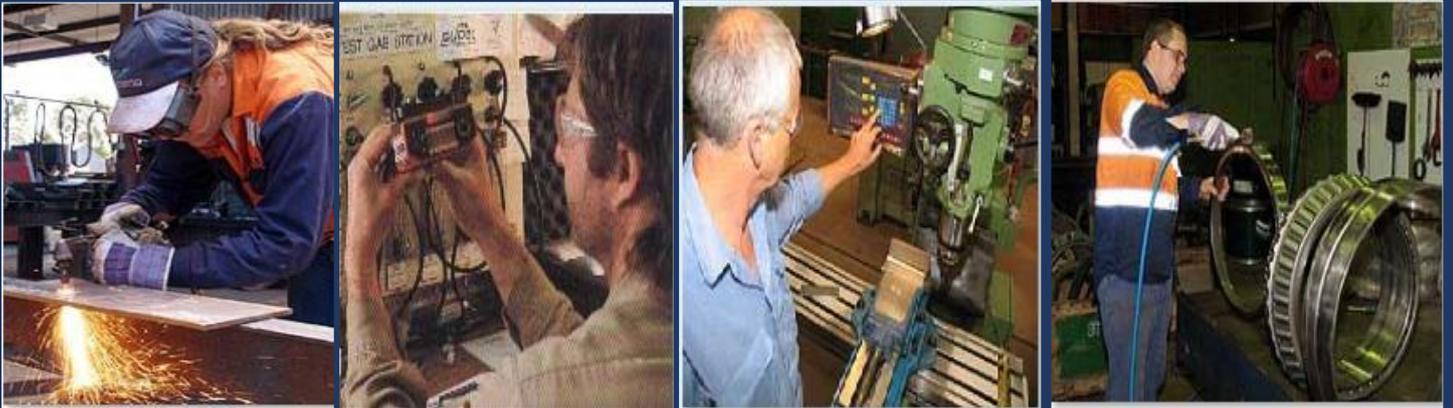


Overview of Whyalla Capability for Defence Industry



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Regional
Development
Australia

WHYALLA &
EYRE PENINSULA



Introduction

The Defence White Paper of March 2016 represents a considerable investment in Defence by the Australian Government over the next 30 years. Defence must deliver a significant capability modernisation program required to build Australia's future Defence capability.

On 26 April 2016, Prime Minister Malcolm Turnbull announced that the contractor to partner with Australia to design and build the next generation of submarines to replace the *Collins*-class would be Direction des Constructions Navales Services (DCNS) of France. The Prime Minister also stated that the fleet of 12 future submarines would be built at shipbuilding facilities in Adelaide, South Australia (SA).

In April 2016 Advisian, a consulting arm of the Worley Parsons Engineering group were engaged by DefenceSA to undertake an assessment of potential supply chain capabilities of Whyalla and the surrounding region for a large portion of the Defence investment listed in the White Paper, these include:

- SEA 1000 Future Submarines;
- SEA 5000 Future Frigates;
- SEA 1180 Offshore Patrol Vessels (OPV);
- Land 400 Phase 2 Combat Reconnaissance Vehicles (CRV); and
- Development of the expanded Cultana Training Area (CUTA).

The assessment found that multiple heavy industry businesses in Whyalla and the Upper Spencer Gulf (USG) region have a track record of delivering quality products similar to those required by Defence projects. They could be expected to offer a competitive set of skills able to complement those available in Adelaide.

The report identifies 10 key Tier 2 and 3 companies in Whyalla and the USG region, for consideration by prospective prime contractors.

It was noted that collaboration is a strength of the region that could be further encouraged and promoted.

Companies in the region with the appropriate experience and ISO accreditations will be required to register and pre-qualify with Tier 1 and 2 Defence contractors.

The Whyalla steelworks does not produce industry standard submarine hull plate, and high-tensile and armour plate required for naval surface vessels and military vehicles. It is unlikely to provide significant quantities of products for the submarine and surface ship programs. Nevertheless, long products such as the structural steel produced by Whyalla would be most suitable for the infrastructure development required at Techport Australia (inclusive of ASC), Edinburgh Defence Precinct and the Land Combat System Precinct. There will also be significant steel requirements for support structures such as construction aids, trestles and heavy-duty lifting frames.

More than a century of raw and processed minerals production has fostered a strong support industry of businesses providing plant, equipment and skills to build and maintain this industrial base. It is this industrial support industry which has the capability to contribute to future Defence projects in SA.

An essential requirement for success in joining the Defence Industry supply chain includes making a commitment to expand existing capabilities to become "Defence-ready".

Defence manufacturing, flowing from the future submarine and surface vessels presents substantial and long term commercial opportunity for Australian SME's. These are not immediate opportunities and are unlikely to become available within the next one to two years. While this allows some time to prepare, develop and enhance capabilities required to successfully bid for Defence work there is no time for complacency. It is especially important for regional business to use this time to proactively engage with Defence Industry, including Tier 1 and 2 contactors and industry development programs to ensure they can be well prepared.

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Whyalla in summary

Infrastructure

- Rail: Connected to the national rail network
- Road: Connected to national road network
- Electricity: Supply and expansion capacity very good
 - Whyalla and Cultana substations rebuilt and augmented (2015)
- Communications: Connected to National Fibre network (2,000 times faster than NBN)
 - equal up and down speeds
- Port: Commercial operating shipping port
 - Distance to Adelaide via sea is 256 NM
 - Transport by tug and barge is 1 day and 2 hrs. (10 Knots)
 - Very possible to load modules in Whyalla (products berth has been used for break bulk cargo and could easily load modules)
- Air: Refurbished Airport, 2 Carriers, Runways with medium Jet capacity

Location

- Adjacent to the recently expanded Cultana training Area
- 45 minutes flight time from Adelaide, 2 carriers
- 4.5 hours by road to Adelaide (380km)

Key Capabilities Identified

- Skilled industrial workforce (approx. 25% of 9,800 FTE total)
- Heavy fabrication infrastructure with ability to design, build and handle very large, complex steel items (physical size, weight and complexity)
- Well-equipped heavy engineering workshops with available capacity (large lathes, welders, borers etc)
- Ability to successfully bid for work and negotiate complex Defence procurement and quality processes
- New build and maintenance capability
- Location with relative close, physical proximity to major mine and Defence operations with very well established rail, road and port infrastructure
- Broad capability with a breadth of products and services across multiple business units able to be bundled and applicable to a range of industries
- Strong Commercial/Engineering teams with experience in infrastructure and project management
- Strong customer service relationships
- Short delivery times for fabricated components with exacting quality standards

Living in Whyalla

- Population 22,700 with approximately 6-700 SME business
- 301 days of sunshine
- Major regional Hospital new build completed in 2014
- Substantial University and Trades training capacity at TAFE SA
- Multiple schools teaching all levels
- Large amount of very competitive industrial land available
- Very competitive housing
- Theatre, cinemas and retail shopping
- Sporting clubs and facilities for every sport, Golf, Aussie rules, Soccer, Netball, Gymnastics, Drag racing
- Beaches, Fishing, Camping
- Northern Coastline, Gateway to Eyre Peninsula and Outback

Background to Whyalla's industrial development

Industrial development began at Whyalla with the discovery of high grade (Hematite) iron ore in the mid 1800's at Iron Knob, approximately 50 km North West of the current city of Whyalla. Commercialisation of the resource was largely made possible with the construction of a railway line from Iron Knob to Whyalla for Broken Hill Proprietary Limited (BHP) which leased the iron ore deposits in the area. The first train ran in August 1901 and iron ore was transported by barges pulled by tugs, across the gulf to Port Pirie where it was used as flux for BHP's lead and zinc smelting operations. A 400 metre jetty was completed in 1902. Installation of an ore conveyor belt in 1915 enabled ore to be sent to supply BHP's newly established steelworks in Newcastle for steel manufacture.

Construction of a harbour and blast furnace commenced in 1939. This also marked the beginning of Whyalla's significant shipbuilding history. The corvette HMAS Whyalla completed in 1941, was the first of 64 ships built at Whyalla at the BHP shipyards.

In 1958 BHP announced the decision to construct a fully integrated steelworks to manufacture steel at their site in Whyalla. Construction of the steelworks was completed a decade later in 1968.

In anticipation of future growth, the City of Whyalla was planned and built to support a population of 50,000 people. Population peaked at 33,000 in 1976. Closure of the shipyards in 1978 and rationalisation of steel manufacturing operations led to a period of industry and population decline over the subsequent two decades. The population of Whyalla stabilised in the late 1990's and has continued to grow steadily over the past 15 years.

Recent industrial development

The City of Whyalla with a population of almost 23,000 people is South Australia's second largest regional city and largest industrial city. It is also the largest and most significant service centre in the Eyre Peninsula region providing retail, education, health, community and other services for residents of Whyalla and the surrounding region.

Manufacturing is Whyalla's largest industry and employer, the city is a principal centre for manufacturing, steel production and iron ore export for the Upper Spencer Gulf and Eyre Peninsula regions. The manufacturing sector is the largest single employer in Whyalla directly employing more than 1,500 people generating additional and substantial indirect employment.

Whyalla is strategically located with close proximity to substantial and growing mining, oil and gas developments located to the north, south and west. The city has well developed transport, heavy and light engineering, fabrication, small business, retail and education sectors directly involved in supplying goods, services and human resources required to meet current needs and future growth of these industries in and around the region.

Until 2015 Mining was the region's most rapidly growing industry. Whyalla is located within the large mineral province of the Gawler Craton and adjacent to the Eucla Basin. These areas have substantial established mineral resource deposits. They also offer great potential for the discovery of new mineral deposits and petroleum sources in the future. There are ongoing developments in a range of minerals including, iron ore, copper, gold and heavy mineral sands, with increased levels of exploration for other commodities including uranium, zinc, nickel, diamonds, petroleum, coal and graphite.

The city of Whyalla is widely known as South Australia's Mining Services Hub, it is a key centre for the processing and export of mineral resources, as a service centre for supporting industries and for training and skilling the future workforce of the industry.

The city and region surrounding it has many positive physical attributes including magnificent natural resources, vast stretches of untouched coastline, and vibrant coastal, inland rural communities with a quality of lifestyle, amenity and services which is the envy of many Australians who live in regional Australia.

Capabilities of some key Tier 2 and Tier 3 Operators in the Whyalla and USG Region

Advisian identified around 16 heavy industry SME's that could be considered as potential contributors to the Defence Tier 2 and 3 supply chain. These 16 entities represent about 1,680 full time employees (FTE), or approximately 20% of Whyalla's workforce. The combined Whyalla workforce is about 9,800 FTE.

Advisian, interviewed management and inspected the workshops / plant / equipment of the following companies. Tier 2 companies are listed ahead of Tier 3, in alphabetical order

Arrium Limited

(Tier 2 not visited) FTE >1,000 (currently in administration)

When BHP divested its steelmaking business in 2000, OneSteel, later Arrium was formed in Whyalla (Figure 19). From 2004, Arrium's investment in a blast furnace re-line boosted confidence in heralding a turn-around in the city's economic decline. In 2005, Arrium's "Project Magnet" started up and Whyalla experienced further improvements in the local economy. Arrium's operational shift from manufacturing to mining also increased the region's prosperity. However, the collapse in base-metal, iron ore, oil and natural gas prices from mid-2014 placed Arrium under severe financial strain.

In April 2016, the company was placed in the hands of an administrator. With the appointment of Korda Mentha, it has been impractical to discuss Arrium's potential involvement in future Defence projects. It should be noted, however, that the company has considerable industrial facilities, which may be available to assist in a regional response to support the upcoming Defence projects. These facilities include large undercover buildings with gantry cranes and plant, including mills, lathes and the like. Given their proximity to a wharf, these facilities should be kept in mind as the financial future of the company becomes clearer.

Equity & Advisory Limited

(Tier 2) FTE >500 Projects \$30 million +

The largest company in the Tier 2 group is Ottoway Fabrication which has been separately referenced below. Although there are others within in the group, such as QMM and FABTECH with services in the water and mining industries, the following companies are involved to the heavy and support industries relevant to this study.

Specific information relating to Ottoway Fabrication follows.

Ottoway Fabrication

(Tier 2) 260 FTE (Turnover \$100 million p.a.)

Ottoway Fabrication is part of the E&A Limited group of companies and is involved in heavy engineering, fabrication and site services. Ottoway Fabrication offers its service to the following market sectors:

- Mining;
- Mineral processing;
- Light, medium and heavy engineering;
- Power generation;
- Defence;
- Water industry;
- Transport; and
- Manufacturing.

The Whyalla workshop has 11,500 square metres of undercover space. The workshop overhead cranes range from 9 to 100 tonnes with a general hook height of 16.5 metres, as it was initially set up to handle locomotive maintenance.

The six hectare site has direct access to the highway to Port Augusta the national rail network and is close to the Whyalla steelworks with its wharf suitable for loading out heavy modules.

Equipment includes:

- Two Kinetic 3000 CNC Profile Cutters;
- Two NC Steel Plate Pyramid Rolls;
- Section Rolls;
- Section Copper and Punch Press;
- Plate Guillotine;
- 40 metre Blast Booth, 40 metre and 80 metre Paint Booths; and
- Heavy-lift 40 metre Straddle (110 tonne lift and carry).

Ottoway Fabrication was the AWD project exclusive supplier to ASC for pre-fabricated hull, wall and weldment sections. In excess of 4,000 fabricated items were delivered over a five year period.

All weldments complied with rigid dimensional, traceability, schedule, quality and safety requirements. In addition, fabricated hardstand support steel was provided. These were loaded out from the old wharf at the Whyalla steelworks and transported by sea to ASC.

Prior to these contracts, Ottoway had prequalified, and then tendered, to build three complete blocks for the AWD project. However, it is understood that the contracting strategy was changed to require the delivery by one contractor of at least ten blocks. It thus precluded Ottoway from tendering. As part of plans for outsourcing components of the new contracts, a rational and consistent tendering strategy should be in place to ensure a “level playing field” and consistent application of agreed tendering parameters. It is also advisable for smaller companies to collaborate and promote themselves as a co-located team with integrated capabilities, thus increasing their collective value offering.

Aside from the Defence work described above, Ottoway Fabrication has produced steel wind turbine towers, oil storage tanks, kilns, ore cars for Xstrata, dump truck bodies and other large scale steel fabrications.

Advisian was advised that Ottoway Fabrication’s Management Systems have been structured on and comply with the requirements of:

- ISO 14001 – Environmental Management;
- ISO 9001 – Quality Management; and
- ISO 18000 AS/NZS 4801 – Health & Safety Management.

Gadaleta GSF Steel Fabrication

(Tier 2) 50 FTE (Turnover \$25 million p.a.)

Gadaleta Steel Fabrication is a family-owned and operated business, which is providing solutions for energy producers, transport, construction, mining and minerals processing clients for over 20 years.

Workshops are located at Port Pirie and Whyalla; undertaking large and small scale projects with a proven track record of project delivery and a strong focus on work, health and safety.

Services include:

- Steel Fabrication;
- Cranage and Rigging;
- Scaffolding;
- Dump Truck Tray Rebuilds;
- Onsite Maintenance;
- Installation and Plant Removal; and
- Other Services.

In relation to steel fabrication, plant includes computer cutting (CNC) and large steel roller and press. Off-site fabrication includes structural steel, pipe work, ductwork, access platforms, machine guarding and vessels (large and small).

In addition, the following capabilities and expertise include:

- Heavy plate fabrication;
- Structural steel fabrication;
- Pipe fabrication;
- Tank fabrication;
- Stainless steel fabrication;
- Hoppers, furnace components, dampers, fan housings, chimneys and flues;
- Specialist welding and welding of pressure parts, heat exchangers and cubicles; and
- A modern blast and paint facility has been designed for the plant and has approved government support funding. A decision to proceed with this facility is on hold pending future work expectations.

Gadaleta GSF Steel Fabrication is a member of the South Australian Crane Association, which is affiliated with the Crane Industry Council of Australia. With a variety of cranes for different tasks, they have an experienced team of qualified crane operators and riggers.

Cowell Electric Supply **(Tier 3) 55 FTE (Projects up to \$10 million)**

Cowell Electric has a long history in project management in the construction of power lines and associated electrical infrastructure. They have been the “go-to” team for the BHP Olympic Dam mine work with a reputation for efficiency and high quality. Whilst not a Tier 2 contractor they have experience in civil construction & concreting, plumbing and gas-fitting, high and low voltage electrical, power line maintenance and construction and refrigeration and air conditioning. Based in Cowell on the Eyre Peninsula, they have the following accreditations:

- ISO 14001 – Environmental Management;
- ISO 9001 – Quality Management; and
- ISO 18000 AS/NZS 4801 – Health & Safety Management.

Cowell Electric has existing Defence experience on projects at Cultana, related to electrical infrastructure at a small scale.

Cowell Electric typically competes with ICE (part of the E&A group of companies) for work on the SA power networks, but would consider subcontracting to E&A for Defence work.

Max Cranes **(Tier 3) >90 FTE (Turnover \$14 million p.a.)**

Established in Port Augusta in 2002, Max Cranes has a team of some 100 personnel. The head office is now located in Adelaide. The company is privately owned and carries out work through the USG region and into Adelaide.

Within Whyalla and the USG region, work is predominantly carried out for Arrium and Santos. Defence work has included heavy lifting for the Cultana Defence site.

Maximum lift capability is 500 tonnes and 200 tonnes for a low loader.

Maintenance of the lifting equipment is carried out at Port Augusta. The crane fleet is modern with no equipment over 10 years.

Max has an impressive and comprehensive list of major clients and is accredited to:

- ISO 9001 Quality Management; and
- AS/NZS 4801 Health & Safety Management.

Nobles Lifting Equipment

(Tier 3) 330 FTE (Turnover \$90 million p.a.)

Nobles Lifting Equipment provides turnkey solutions for lifting applications through various stages of consultation, design, construction, proof load testing and supply. The company is more than 100 years old and employs over 300 staff in 15 branches nationwide. In SA, there are branches located in Adelaide, Port Lincoln, Whyalla and Roxby Downs.

The Whyalla branch has a dedicated team of four staff and the Adelaide branch offers support across all services for both labour and administration.

Nobles Lifting Equipment works in a number of industry sectors, including:

- Oil & Gas;
- Mining;
- Engineering Construction / Fabrication; and
- Cranes & lifting.

All branches have NATA & DNV accredited testing laboratories and load testing facilities to 1,000 tonnes capacity.

An Asset Management of full tagging and testing is provided via a software program for full traceability.

Clients include, but not limited to:

- Technip Offshore;
- BHP Billiton Olympic Dam;
- John Holland; and
- ASC (AWDs).

Sudel Industries

(Tier 3) 12 FTE (Turnover \$4-6 million p.a.)

Sudel Industries is an instrumentation company with a strong link to Arrium steelworks and BHP Billiton Olympic Dam mine. They also provide services to Alinta Energy and BOC Gas.

The company performed well, employing of 25 FTE. Since the recent economic downturn the Whyalla establishment employs 6 FTE, with the same number of personnel also engaged at their Adelaide office.

Sudel had a 15 year contract with Arrium. The work involved blast furnace repair with Leighton Contractors (electrical instrumentation). Due to Arrium's poor financial position the work is now carried out in-house.

Sudel Industries' major competitor is EDI Downer, who, as a Tier 1 contractor uses their own supply chain (subcontractors). Other industries Sudel is working in are food, water, wine, pharmaceuticals, gas and health, and have the following accreditations:

- ISO 14000 – Environmental Management;
- ISO 9001 – Quality Management;
- IOS 18000 AS/NZS 4801 – Health & Safety Management; and
- NATA accredited testing / calibration.

Their Adelaide office serves the state's southern region, mostly working in instrumentation calibration, however, in the short term the two offices look for work as "one team".

Sudel expressed optimism regarding the upcoming Defence work and stated that they would consider teaming with other electrical contractors in the region.

Whyalla Hose & Fittings Services

(Tier 3) 17 FTE (Turnover \$4 million p.a.)

Whyalla Hose & Fitting (WH&F) is a support company to the heavy industries in Whyalla and the USG / Eyre Peninsula region. Established over two decades ago, it has the following accreditation:

- ISO 9001 Quality Management;
- Achilles (Oil & Gas) Accredited; and
- AS/NZS 4801 Health & Safety Management (expected June 2016).

The workshops and facilities are well managed. The company provides a 24/7 service. Their offering extends from supply of hydraulic hoses and fittings through to maintenance and repair of heavy gearboxes and similar equipment.

WH&F has a site service contract with Santos at Port Bonython, and has been the preferred service provider for compressor and mechanical repairs for the past eight years with BOC (Whyalla and Olympic Dam mine operations).

For the past five years, they have managed the gearbox contract for supply / service with Arrium, and in partnership with Applied Industries Technologies manage a bearing and transmission contract with Arrium.

Work can be carried out in their workshops or at site with a large range of customers (parent companies and Tier 1 contractors).

S J Cheesman

(Tier 3 - Not visited) 36 FTE (Turnover \$5 million p.a.)

This company has grown with Port Pirie since 1908. It has a strong history in heavy fabrication, with facilities ranging from in-house design through CNC cutting, milling and machining, to welding of ferrous and non-ferrous material, and abrasive blasting and painting. Their major client has been Nyrstar (lead smelter) in Port Pirie, but they have serviced projects across

WHYALLA HEAVY INDUSTRY SUPPLY CHAIN

COMPANY	MAIN BUSINESS	PRODUCTS AND SERVICES
A & G Doranzio afdorazio@internode.on.net 08 8645 0516	Domestic and Industrial Concreting	Domestic and Industrial Concreting
AAM Pty Ltd w.katena@aamgroup.com www.aamgroup.com 08 8640 4391	Geospatial Services, specialising in collection, analysis, presentation and delivery of geospatial information.	3D GIS and Visualisation, Arial Survey, Consulting, Surveying (Land, Construction and Infrastructure), Laser Scanning, 3D modelling and BIM, Satellite Imagery, Web Mapping
Airhawk Australia Pty Ltd info@airhawk.com.au www.airhawk.com.au 1300 783 128	Comfort Seating systems	Seat cushions for use in vehicles, long-haul transportation and other heavy equipment to address need for improved comfort and reduction of lower back pain.
Aquest Electrical darren@aqest.com.au www.aquest.com.au 08 8644 2244	Electrical, Communication and Refrigeration solutions	Low Voltage and Hazardous area installation and maintenance, High Voltage switching fault finding and repair, communications data and telecommunications, refrigeration, air conditioning installation and maintenance
Asset Protective Fencing eventswhyalla@internode.on.net www.assetprotectivefencing.com.au 08 8645 2855	Protective Fencing, fixed and temporary providing site protection for a range of industrial and domestic applications including building, construction sites and road works	Fixed and temporary fencing, crowd control barriers, Range of self-storage and mini containers, shade cloth
Avid Engineering tony@avideng.com.au 08 8645 7002	Engineering/Metal Product Manufacturing/Fibreglass Fabricators	Industrial Reclamation, Metal Spray, Fibreglass, Epoxy
Aztec Analysis b.brown@aztecanalysis.com.au www.aztecanalysis.com.au 08 8644 0432	Analytical services/ Structural, civil, mechanical, maritime and geotechnical Engineering Consultant	Specialist engineering services for the maritime, mining, mineral processing, energy, petrochemical & construction industries
Boral Quarries www.boral.com.au 08 8645 0260	Quarry	Quarry Items,
Boral Concrete tom.brown@boral.com.au www.boral.com.au 08 8644 3404	Concrete Suppliers	Ready Mix Concrete
Bridgestone Service Centre Whyalla bscwhyalla@internode.on.net www.bridgestone.com.au 08 8644 2120	Tyres and rubber repairs, Services, Accessories	Light Truck, Agricultural, Passenger, 4WD, industrial Tyres, wheel alignment, mechanical services, wheels, batteries
Caledonia Scaffolding bjones@calsa.com.au www.caledoniascaffolding.com.au 08 8326 3365	Industry Scaffolding and Height access Services	Scaffolding, Scaffold design and Engineering
Career Employment Group andrew.anninos@ceg.net.au www.ceg.net.au 1300 885 697	Employment and Training Services	Group Training, Australian Apprenticeship Support, Labour hire, Indigenous Employment Initiatives
Delmac Power Equipment operations@delmacpe.com.au www.delmacpe.com.au 08 8645 0415	Power Equipment Specialist, Industrial and Garden Power Equipment.	Service and Repairs, Chain Sharpening, Small Petrol, Diesel Engines, Chainsaws, high pressure cleaners, industrial heaters, lawnmowers, brush cutters, generators, pumps, hedge trimmers, edge's, blowers, industrial evaporative air conditioners, fans.
Des's Transport louise@des.com.au www.des.com.au 08 8644 7744	Transport	Taxis, mini bus rental, Gulf Getaways, large bus hire and charter, Groovy Gate Tours, Whyalla Air Charter
Electrical Discounters tomantonio@electricaldiscounters.com.au www.electricaldiscounters.com.au 08 8644 0333	Electrical retailer	Home appliance, electronics, computing needs, Outdoor entertaining, Small appliances, Whitegoods, Computers, Jaycar, Heating/Cooling, Kitchen, TV/Audio/Stereo

Ewings transport (Contractors) ewingsco@sa86net.com 0408 810 243	Transport, Heavy Haulage	Heavy Haulage
Fenner Dunlop Whyalla colin.kranz@fennerdunlop.com.au www.fennerdunlop.com.au 08 8644 4100	Industrial Conveyors	Conveyor Systems and Equipment, Conveyor Belt, Conveyor Services, Engineered Conveyor Solutions, Conveyor Accessories, Conveyor electrical, Conveyor Diagnostics, Wear Protection
Genesee and Wyoming tworby@gwrr.com www.gwrr.com 08 8644 3108	Rail transport	Coal Supply Chain, Intrastate haulage of bulk commodities including grain, steel and minerals,
Grader & Excavator Hire french9@activ8.net.au	Grader and Excavator Hire	
HeavyMech tony.nettle@heavymech.com.au www.heavymech.com.au 08 8262 420	Heavy Equipment Maintenance/Engineering/ Fabrication	Lead supplier of machining and general engineering services to mining, manufacturing, power, Defence, Oil and Gas and Exploration industries
ICE Engineering & Construction nickb@iceengineering.net.au www.iceengineering.net.au 08 8644 2333	Specialist Electrical and Instrumentation Installation in the Heavy Industrial sectors, Panel Manufacture, Subcontractor Management,	Providing services to Mining, Hydrocarbons and Infrastructure industries, Project Management, Site supervision, Remote power generation, HV installation, terminations, switching (33kV) and testing, LV & ELV installation, Hazardous area installation, Communications, Underground cabling, Substation Construction, Main Switch Rooms, Motor Control Centres, Distribution Boards, Control panels, Temp power boards, Process Control System, Security, Fire, CCTB
Inspirations Paint Whyalla 3dwhyall@tpg.com.au 08 8645 4455	Paints	Paint and Wood care, Painting accessories, Painting Tips
Kev's Mowing & Landscaping Services kevteuns@hotmail.com 0421 316 869	Gardening, Landscaping, Mowing	All Gardening and Landscaping services
Lester Franks amorse@lesterfranks.com.au www.lesterfranks.com.au 08 8642 3044	Land and Engineering Survey, Surveyors, Engineering, Geo-Spatial, Information and Communications,	Land Surveyors, 3D Scanning, Metrology and CAD Design services, Cadastral Surveying, Engineering Surveys, Laser Track Services, Dimensional Inspection and GD&T Analysis, Reverse engineering, Wear and Deformation Analysis, Heritage Documentation, Information and Communications,
Logicams Limited julian.kovacic@logicamms.com www.logicamms.com.au 08 8645 2145	Multidiscipline Engineering consulting, project delivery, asset performance and maintenance services	Hydrocarbons - Offshore topsides, Onshore processing facilities, Compressor stations, Coal seam gas, natural gas, LNG, Petrochemical, Minerals and Metals - Materials handling, minerals processing, Iron ore, Coal, Precious metals (gold), Base Metals (copper), Rare earths, Uranium, Phosphates and Infrastructure - Power generation, Water and wastewater treatment, production, Onshore pipelines, Environmental Approvals, Specialist consultancy
M.J.M Abrasive Blasting mjmabrasiveblasting@bigpond.com 08 8645 5811	Heavy Equipment Maintenance/Engineering/ Fabrication	Industrial, commercial sand blasting
Maaric Industrial Services maaricindustrial@bigpond.com www.maaricindustrial.websyte.com.au 08 8645 9950	Industrial Dry Cleaning and Laundry Services	Industrial dry cleaning, Industrial laundry, Company and individual work cloths, Hire of walk off mats, runners, Recycling gloves and rags, Repairing work cloths
MADEC cfoote@madec.edu.au www.madec.edu.au 08 8644 8000	Employment and Training Services	Employment - Indigenous Services, Disability Employment, Labour Hire, Education and Training - Career Pathways, Courses, In-house training, Online Training, Traineeships, Compliance, Harvest Trail

Michael Grear Surveys admin@mgsurveys.com.au www.mgsurveys.com.au 08 8644 2040	Licensed and Engineering Surveyors	Land Division, Property Boundary Surveys, Topographic Detail Surveys, Engineering and Construction Surveys, 3D Scanning, Lease and Easement Surveys, Property Development, Project Management, Preliminary development Viability assessment
North Western Metal Recycler nwdt11@bigpond.com 08 8645 1251	Metal Recyclers, Scrap Metal Merchants	Scrap Metal
North Western Contract Haulage nwdt11@bigpond.com 08 8649 2943	Driver Training, Haulage	Driver Training, Haulage
Northern Agencies smokey@ozemail.com.au / northernagencies@ozemail.com.au 08 8645 9210	Supplier	Food service and equipment
Perry Fuel Distributors warren.rowley@perrys.com.au www.perrys.com.au 08 8645 7605	Fuel Suppliers Lubricants, Bulk Supply	Unleaded, Premium 95, Diesel, lubricants, Bulk fuel
Quantum Refrigeration & Air Conditioning Services zmurphy@quantumrefrigeration.com.au www.quantumrefrigeration.com.au 08 8645 3006	Professional service in all aspect of air conditioning and refrigeration to domestic, commercial & industrial sites	Supply and installation of new refrigerated and evaporative systems, Modifications or replacement of existing systems, Preventative maintenance, Repairs to all makes of air conditioning and refrigerated units, Repairs to refrigerated vans, Daikin, Bonaire, Breeze Air and Cool Air dealer, preferred provider for Fujitsu and Samsung service repairs and warranty claims
Rapid Freight Solutions chnarakis@rapidfreight.com.au 08 8645 2855	Freight solutions	Local courier service for Australia Wide, Door to door, Same-day, Overnight or Road Express
SAGE Automation michael.ellis@gotosage.com www.gotosage.com 0417 898 551	Electrical and instrumentation	Specialising in Industrial automation and control systems, designs, constructs, supports and improves industrial control, automation solutions, custom control and automation solutions for defence, infrastructure, manufacturing, mining and utilities industries, Road Solutions - Motorway Management ITS solutions, Road Tunnel Solutions, Bridge Solutions, Manufacturing - Food processing and packaging, Turnkey industrial automation projects
Scholz Transport admin@scholztransport.com.au www.scholztransport.com.au 08 8645 1122	Transport	Container Transport, Drop Decks, Road trains, Single Trailer combinations, Drop deck extendable trailers for high and long loads, Refrigerated Pans, Tautliners & flat tops
Signarama whyalla@signarama.com.au www.signarama.com.au 0498 049 824	Full service sign centre	Signs - Neon & LED, banners, Car Graphics, 3D Fabricated letters & logos, Digitally printed signs, Shop & Factory signs, Directory Signs, Building, Outdoor, indoor, promotional, vehicle signs
Programmed (formally Skilled) atravers@skilled.com.au www.programmed.com.au 1300 361 582	Property Services, Operations and Maintenance, Skilled Workforce, Employment and Training Services	Property Services - Painting, Signage, Grounds, Golf Courses, Race Courses, Sports Stadia and Turf, Building projects, Audio Visual, Data & Communications, Electrical, Sustainability, Operations and Maintenance - Facility Management, Industrial Maintenance, Marine, Shutdowns, PPP, Skilled Workforce - Staff hire, Permanent recruitment, Managed labour, Temporary staffing, Indigenous Employment, Training services, HR services, health professionals.
Specialised Tyre & Rubber Repairers Pty Ltd starr03@westnet.com.au	Tyre and rubber repairs	Specialise in earthmover and industrial tyres, OTR and agricultural tyres, buying and selling used and second hand earthmoving tyres,

www.specialisedtyre-rubberrepairers.websyte.com.au 08 8645 0444		Earthmover and industrial tyre reconditioning, Sidewall armouring, Arnco flat proofing, Industrial tyre/ wheel modification. Rubber to metal bonding, Industrial rubber products, Rubber extrusions
Stassi Engineering nick.stassi@stassieng.com.au www.stassi.com.au 08 8645 2244	Civil, Structural, Environmental Consulting and engineering services	Consulting engineering services in residential, light commercial, subdivisions, soil drilling, environmental, project management, engineering survey and inspection reports, Building design, wind loading, drainage plan, engineering design, preliminary footing report, retaining wall design, bushfire assessment, site environmental assessment, Civil construction design, certifications, foundation design, storm water retention, structural calculations, pre-purchase inspection, Scientific Testing/Analysis - soil testing, percolation report, site classifications, compaction and penetrometer testing.
Cleanaway (formally Transpacific) chris.coathupe@transpac.com.au www.cleanaway.com.au 08 8644 0566	Waste, Recycling and industrial Management	General Waste, Recycling, Industrial services, Liquid and Hazardous Waste, Used oil and oily water, Construction and demolition waste, Document Destruction, Medical waste, Bathroom Hygiene Services, Grease Trap, Wastewater Management, Bins and Skips
Veolia mark.inglis@veolia.com.au www.veolia.com 08 8645 8849	Waste Management	Heavy Industry - Industrial Water management, Industrial cleaning, Industrial Energy, Stakeholder, Contractor, Refractory Management, Camp Construction, Commercial - Commercial Water, Waste and Energy Management, Education and Training, Reporting, Dedicated Account Management, Municipal and Residential - Municipal Water, Recovering Resources from waste, Community Education, Building Sustainable Cities, District Energy, Civil and Facility Maintenance
West Coast Supplies westcoastcs@internode.on.net 08 8645 2503	Cleaning Products Supplier	Chemicals and Cleaning Equipment - mops, brooms, buckets, wipes, cloths, Vacuums, Vacuum bags and spares, Polishers, Scrubbers, Paint - Industrial, Architectural, Marine, Auto, Timber coatings, Specialised coatings, epoxies, Auto detailing – polishes, cutting compounds, brushes, deodorisers, degreasers etc, Crash supplies - sandpaper, spray guns, masking tapes, body fillers, sanders, Packaging - paper, toilet paper, handtowel, tissues, cups, takeaway containers, kitchen consumables, cling film, bin liners, alfoil, straws, Hotel and Motel guest supplies - soaps, shampoos, conditioners, sanitary bags, Industrial adhesives - resins, tapes, glues, Industrial chemicals - citric acid, Potassium Hydroxide etc, Matting - safety, rubber, carpet, Service and Repair work
Whyalla Battery Electric whybattelect@bigpond.com 08 8645 8566	Auto Electrical Services	Batteries, Service and repairs, Auto Electrical services
Whyalla Earthworks P/L whytipper@internode.on.net www.whyallatipperhire.websyte.com.au 08 8645 4990 0428 897 981	Excavating Contractor, Earthmoving, earthworks, Equipment hire	Hire of Bobcats, tippers, dog trailers, water trucks, post hole borer, chain trencher, tandem tippers, Earthmoving, Earthworks, Excavation, Earthmoving equipment hire
Walling Systems & Whyalla Precast wallingsystems@harboursat.com www.wallingsystems.com.au 08 8565 3243	Precast reinforced concrete elements.	Precast and Site cast concrete industry, Ability to combine in situ concrete, Seawall Panels, Concrete Panels Stone faced or plain, Retaining Walls, Culverts / sumps and pits,

		Concrete Barriers, Street Furniture, Concrete Repair
Workskil rfrigo@workskil.com.au www.workskil.com.au 08 7603 9800	Employment and Training Services	Providing a range of employment, work experience, disability, youth, indigenous and health services



2016



Cowell Electric

CAPABILITY STATEMENT



ISO 14001
CERTIFIED
ENVIRONMENTAL
MANAGEMENT



ISO 9001
CERTIFIED
QUALITY
MANAGEMENT



AS/NZS 4801
CERTIFIED
SAFETY
MANAGEMENT





PROJECT MANAGEMENT

Cowell Electric has a long history in project management in the construction of powerlines and associated electrical infrastructure.

More recently, we have expanded our project management capabilities to include civil, mechanical, electrical, instrumentation and communications to align with our existing expertise in these areas.

We not only have the abilities in project execution but also in undertaking turnkey solutions including design and construction.

- Project management expertise over a broad range of project areas including civil, mechanical and electrical.
- We not only have the abilities in project execution but also in undertaking turnkey solutions including design and construction.
- We utilise our existing expertise in electrical, plumbing and civil to underpin project success.





GOING ABOVE AND BEYOND EXPECTATIONS

CIVIL CONSTRUCTION & CONCRETING

Cowell Electric's newest department have already 'cemented' themselves as the 'go-to' team with their loyal clients in the Olympic Dam area, holding a steadfast reputation for efficiency and high quality.

The highly capable team have the skills and experience to construct complex concrete structures, along with the application of specialised coating and treatments. Cowell Electric has a large range of equipment to undertake civil activities.

- Undertake plant footing modifications for shutdowns and maintenance.
- Construct designated walking areas and pedestrian footpath construction.
- Retaining walls, bunding and motor plinths.
- Pedestals and trenching and earth works.
- Concrete slab demolition and replacement tank footing installations.





PLUMBING & GAS FITTING

First established in the Roxby Downs region almost two decades ago, the Cowell Electric Plumbing Department primarily undertakes works on large scale utilities and infrastructure on behalf of their clients.

Three key areas include the maintenance and installation of water infrastructure including pipelines and local reticulation, sewerage networks and disposal systems along with gas mains distribution and metering.

- **Emergency response for major pipeline infrastructure.**
- **Pump station installation, repairs and maintenance.**
- **Water pipeline construction and maintenance.**
- **Gas mains installation and maintenance.**
- **Poly and steel pipeline welding.**
- **Maintenance and repairs to effluent disposal systems.**





USING TURN-KEY SOLUTIONS FOR SUCCESS

HIGH & LOW VOLTAGE ELECTRICAL

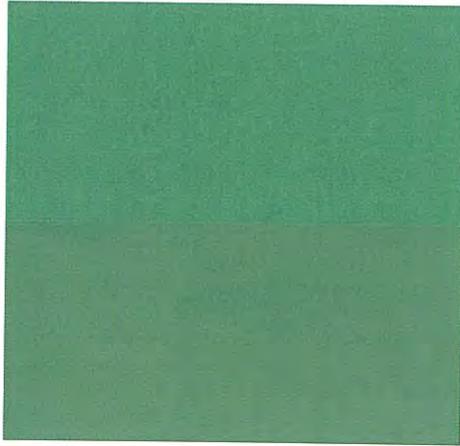
Cowell Electric is renowned for construction of high and low voltage installations.

Most recently, Cowell Electric completed electrical and instrumentation installation projects for raised bores and the process areas.

We have a large team of electricians and electrical specialists based at Olympic Dam.

- Process control equipment modifications, PLC and SCADA.
- Switch rooms and motor control centres (MCCs) installation.
- CCTV and communications.
- Substation moderations, design and construction.
- Overhead infrastructure alterations.
- High voltage underground services installation.





POWERLINE MAINTENANCE & CONSTRUCTION

With over 40 years' experience in the construction and maintenance of large projects, Cowell Electric has ably demonstrated their ability to deliver major projects successfully.

We've showcased our capabilities by stringing 3000 kilometres of power lines across Australia in all mainland states and territories.

Key customers of the Cowell Electric team include multinational companies Transfield Services, Santos and BHP Billiton.

- Installation and maintenance of low voltage distribution and high voltage distribution.
- Live line work.
- Construction of transmission lines up to 275kV.
- Repairs, maintenance and emergency response for powerlines.





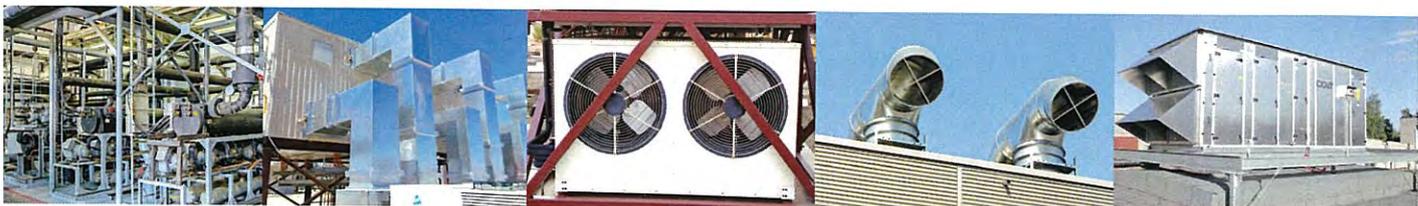
**TAKING
OUR SKILLS
BEYOND THE
HORIZON**

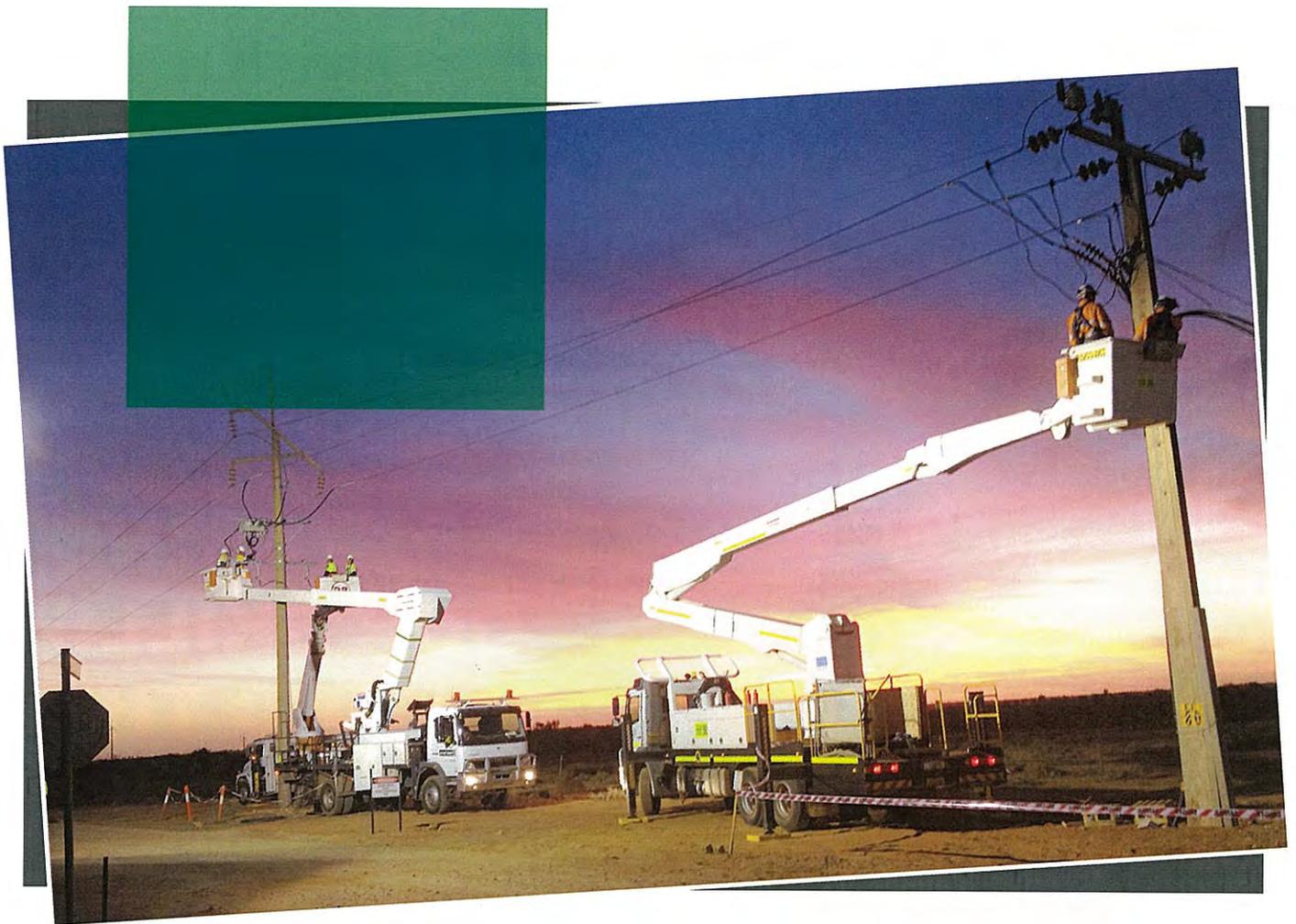
REFRIGERATION & AIR CONDITIONING

Cowell Electric established the Refrigeration and Air Conditioning department as part of a broader Defence site facilities maintenance contract at Woomera in 2001.

We have since expanded our operations to include air conditioning and refrigeration services in Roxby Downs, Olympic Dam and other remote locations, specialising in commercial and industrial air conditioning along with mining camp facilities and substation air conditioning installations and maintenance.

- Installation, maintenance & repair of industrial and commercial air conditioners, refrigeration systems and chillers.
- Installation and maintenance of switch room air conditioning units.
- Cool room installation and maintenance.
- Remote camp air conditioning and refrigeration maintenance management including kitchen, office and dormitory facilities.
- Camp air conditioning upgrades and bulk change outs.





HEAD OFFICE

78 Schumann Road, Cowell
PO Box 70, Cowell SA 5602

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F: (08) 8629 2115

E: cowellelectric@cowellelectric.com.au

W: www.cowellelectric.com.au

MINING SERVICES

Lot 42C Charlton Road Olympic Dam
PO Box 100, Olympic Dam SA 5725

P: (08) 8671 0018

F: (08) 8671 0511

E: olympicdam@cowellelectric.com.au

W: www.cowellelectric.com.au

MAX

SPECIALIST LIFTING
EQUIPMENT HIRE
TRANSPORT



OUR TEAM MAX

In our experience, there are three qualities generally sought after by organisations looking for specialist lifting, transport and equipment hire services. **1. The industry intelligence to understand and solve specific and often complex requirements. 2. The operating, safety and quality assurances for a trouble-free process. 3. The capacity to deliver projects at the appropriate scale and speed. We count these as part of our can-do capability.**

Our company

Established at Port Augusta in 2002, MAX today is a leading specialist lifting, transport and equipment hire company operating throughout South Australia and right across the country.

Since start-up, we have invested a great deal in our team, operating systems and modern flexible fleet, which can be counted among the nation's best and most advanced.

We have a track record for innovative solutions and successfully handling large-scale complex projects for local, national and global companies. Industry sectors include oil and gas, mining and resources, power and energy, transport and infrastructure, and heavy industrial.

Our 100-strong team is located at our premises at Port Augusta, Whyalla, Moomba and Adelaide and at customers' sites under long-term contract arrangements.

Our remote work expertise is up there with the best in the country, including in central Australia's harsh outback. We take pride in our reputation for well-executed solutions on highly specialised projects, such as shut down and maintenance, recovery and derailment and heavy haulage.

Our services are on offer every day of the year, any time of the day or night.

Naturally, safety is our top priority and we have international-level quality and safety management systems certification.

Our company values are grounded in community and demonstrated in a culture based on mutual respect, honesty and personal accountability in all our dealings—with each other, our business partners and our customers.

In keeping with our values we support many and varied community organisations across South Australia.

Our approach

In our view, true can-do capability can only exist when a number of interlocking elements come into effect to form the platform for operations. Our can-do capability is evident from a reputation as the go-to people for the safe, reliable relocation and positioning of equipment, machinery, buildings or materials—in any situation.

- The right people in the right place
- A modern fleet of all-terrain cranes and transport equipment
- State-of-the art fleet maintenance and management
- Safety and quality demonstrated through international-level certification
- Streamlined operations through equipment planning system software

Our promise

It starts with listening and asking the right questions so that we comprehensively understand what you want to achieve. We then tailor our lifting, transport and equipment hire services to your requirements. For you, this means peace-of-mind confidence knowing your job will be delivered safely, on time and to budget. Bottom line, our customers tell us that it's our steely determination to go all out to meet the particular needs of their business that sets us apart, whatever their field of operations, how demanding the terrain and no matter the time of day. Such can-do capability is how we've come by our reputation as being not just good, but excellent people to deal with.

- Trouble-free lifting service delivery
- Modern superior fleet
- Safety and quality assured
- All-terrain coverage
- After hours and emergency rapid response
- Environmental compliance

Sectors

- Oil & Gas
- Mining & Resources
- Power & Energy
- Transport & Infrastructure
- Heavy Industrial

Services

- Specialist Lifting
- Crane & Heavy Haulage Equipment Hire
- Transport
- Servicing & Maintenance
- Site Inspections
- Job Safety Analysis
- Equipment Monitoring
- Engineering
- Drafting
- Project Management
 - Initial investigations and lifting studies
 - Site analysis, onsite supervision and management
 - Large plant shuts

Fleet & Equipment

- Crane & Transport Equipment Hire wet + dry
- Generators & Compressors
- Access Equipment
- Prime Movers—road train capable
- Trailers—floats, low-loaders, drop-decks, standard, dollies
- Trucks—tilt trays, rigging, service
- Light Vehicles

SAFETY

- Occupational Health and Safety Management System certified to 4801:2001
- Exemplary safety record
- Safety culture driven from the top down and ground up
- Open communication to encourage greater awareness
- Cranes assessed annually under national crane safety program
- Regular internal and external quality and safety audits
- Staff induction and continuous training in safety procedures

KNOW-HOW

- Specialists in complex and remote regions
- Continuous training and development
- Experienced in rapid mobilisation of personnel, plant and equipment
- Complete project solutions
- Adept at working across multiple areas and markets
- Services tailored to project and customer needs
- All areas and terrains covered

OPERATIONS

- Quality Management certified to ISO9001:2008
- Site analysis, crane and rigging planning software
- Achilles supplier registered and prequalified to manage and mitigate risk, streamline procurement and reduce cost and effort
- Around-the-clock breakdown responsiveness
- Satellite tracking and remote vehicle monitoring
- Environmental footprint monitored annually



TEAM

- Well-honed team intelligence
- Highly trained lifting and rigging operators
- In-house crane specialists, technicians and mechanics
- Expertise totalling thousands of projects
- Excellent people to deal with
- A network of specialists for additional capacity as required
- Fresh input from trainees and apprentices across the business

FLEET

- More than 130 individual units and 300 items of specialised equipment
- One of the largest fleets of mobile cranes operating in regional Australia
- All cranes mine-site compliant
- Size ranges from 12-tonne pick & carry to a 500 tonne all-terrain hydraulic crane
- Fleet management and maintenance system nationally accredited
- Technical support and spare parts backup available as necessary

CAN-DO CAPABILITY™

CASE STUDIES



In control

CLIENT: Enerflex

MARKET SECTOR: Oil & Gas

PROJECT: Control Room Installation, Moomba – Cooper Basin

MAX was engaged to unload and install a 59 tonne motor control centre control room at Moomba in the Cooper Basin. The LTM 1400 all-terrain crane was mobilised 1000 km to the site with the support of two road trains of equipment. An extensive rigging arrangement was used with three spreader beams, as the control room had eight lift points. An extensive method statement was developed to ensure the job was completed with minimal risk, and an experienced supervisor was on site to ensure everything went according to plan. The crane was on site for a day and then returned to the depot at Port Augusta.

SPECIFICATIONS:

The LTM 1400 was rigged up with 80 tonnes of counterweight and 36 metres of main boom to lift the control room at a 12-metre radius, giving a safe working load of 88.3 tonnes. Two road trains of counterweight were also mobilised when setting up for the lift, which was incident free and a safety supervisor was on site throughout.



On track

CLIENT: EDI Rail

MARKET SECTOR: Rail

PROJECT: Derailed Ore Wagons Recovery, Spencer Junction

MAX was engaged to recover 10 derailed ore wagons weighing in at 90–100 tonne at the Spencer Junction rail terminal at Port Augusta. An experienced MAX heavy lift supervisor conducted a site inspection before the lift. As the derailed wagons were located within 2 metres of the main rail line, all lifting had to be completed within a restricted space. Due to unstable ground, extra outrigger mats were used to ensure the stability of the crane.

SPECIFICATIONS:

The Liebherr LTM 1400 was rigged with 120 tonnes of counterweight and 30.9 metres of main boom, giving a lifting capacity of 105.8 tonnes and a radius of up to 11.5 metres. The lift was completed incident free and a safety supervisor was on site throughout.



Safety first

CLIENT: James Contracting Services

MARKET SECTOR: Power & Energy

PROJECT: Transformer Lift, Cultana Augmentation Substation

MAX was engaged to unload a 105-tonne transformer and place it into a prepared concreted bunded area at the site of the new Cultana Augmentation Substation. Positioning the transport played a crucial part during the lift, as it needed to be close enough to be able to lift the transformer at the required radius. Due to site restraints, one of the crane's outriggers also had to be positioned inside the bunded area.

SPECIFICATIONS:

The Liebherr LTM 1400 was rigged with a 120-tonne counterweight and 20.6 metre boom, giving a lifting capacity of 116,100 kg at a radius of 10.5 metres. During the planning phase, the project involved numerous site visits, and the preparation of a lift study, job safety analysis and CAD drawings—under the watchful eye and strict scrutiny of all of the parties involved. The lift was completed free of incidents and a safety supervisor was on site throughout.

CAN-DO CAPABILITY™



Industry certifications



Industry memberships



EQUIPMENT PROFILE

Specialist lifting

FRANNA	15-25 TONNE ARTICULATED CRANE
TIDD PC25	25 TONNE ARTICULATED CRANE
TADANO GR250-N-1	25 TONNE ROUGH TERRAIN CRANE
TADANO TR500E-2	50 TONNE ROUGH TERRAIN CRANE
LIEBHERR LTM 1055-2	55 TONNE ALL-TERRAIN CRANE
TADANO GT-600EX	60 TONNE TRUCK MOUNT CRANE
LIEBHERR LTM 1070-4.2	70 TONNE ALL-TERRAIN CRANE
GROVE GMK 4080-1	80 TONNE ALL-TERRAIN CRANE
LIEBHERR LTM 1090-2	90 TONNE ALL-TERRAIN CRANE
GROVE GMK 5100	100 TONNE ALL-TERRAIN CRANE
LIEBHERR LTM 1130-5.1	130 TONNE ALL-TERRAIN CRANE
TADANO FAUN ATF 103G-5	130 TONNE ALL-TERRAIN CRANE
GROVE GMK 5180	180 TONNE ALL-TERRAIN CRANE
LIEBHERR LTM 1250-1	250 TONNE ALL-TERRAIN CRANE
LIEBHERR LTM 1400-7.1	400 TONNE ALL-TERRAIN CRANE
TEREX DEMAG AC500-2	500 TONNE ALL-TERRAIN CRANE

Equipment Hire

ELECTRIC SCISSOR LIFT	14FT-40FT
ALL-TERRAIN DIESEL SCISSOR LIFT	26FT-53FT
ARTICULATING BOOM	34FT-135FT
DIESEL TELESCOPIC BOOM	85FT-135FT
GENERATORS	20KVA-1375KVA

Transport

PRIME MOVERS	BOGIE DRIVE AND SINGLE DRIVE
SEMI-TRAILERS AND ROAD TRAINS	DROP-DECK FLOATS, FLAT BED, AND DECK WIDENING LOW-LOADER TRAILERS
TILT TRAY	ISUZU TILT TRAY
RIGGING TRUCK	ISUZU AND HINO



HEAD OFFICE PORT AUGUSTA

Lot 6, Main North Road Port Augusta
South Australia 5700 / PO Box 2086
P: 08 8641 3955
F: 08 8641 3977
E: admin@maxcranes.com.au
ABN 16 944 775 176

ADELAIDE OFFICE

22 Cavan Road Dry Creek
South Australia 5094
P: 08 8359 7353
F: 08 8641 3977

WHYALLA DEPOT

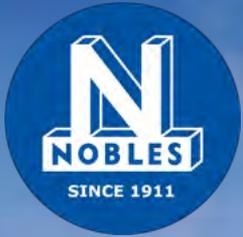
Lot 132, Mulconray Road Whyalla
South Australia 5600
P: 08 8644 3142
F: 08 8641 3977

MOOMBA DEPOT

Lot 5A, Browns Road Moomba
South Australia 5710
P: 0447 602 829
F: 08 8641 3977
E: supervisor2@maxcranes.com.au

www.maxcranes.com.au

The Complete Solution for: Lifting, rigging, service and engineering design.





Welcome

Presented by:

- Michael Gancarz
- Jeff Morton

Presented for:



Corporate Video

Lifting solutions of
a different kind.
How?



AGENDA

- Local Team & National Coverage
- Asset Management – Tech Inspect
- Certifications & Industry Service
- Service and Repairs
- Capabilities
- Servicing Response Times
- Supplier Partnerships
- Distribution Network
- Components We Stock
- What Sets Us Apart
- Training & Education



National footprint





National coverage

For mission critical lifting and rigging products or services, rely upon Nobles and our extensive coverage.

South Australia Coverage

Whyalla Branch

- Whyalla has a dedicated team of 4 staff:
 - Branch Manager – Jeff Morton
 - Administration/ Sales – Andrea Saler
 - Warehouse/ Supervisor– Jason Sterrett
 - Inspections/ Sales– Jordan Grimes
- The Adelaide branch offers support across all services as required, for both labour and administration.
 - 7 Testing/ Inspection Officers
 - 3 Crane Technicians
 - 5 Engineers



Tech Inspect

A photograph of soldiers in combat gear, including helmets and sunglasses, holding rifles. The soldier in the foreground is shouting with his mouth wide open. The background shows a hilly, outdoor environment.

Leave nothing to chance
Clear communication, process
and systems for absolute
assurance and compliance

Asset Management



A. NOBLE & SON LTD.

TECH INSPECT

Lifting Equipment • Data Management

Welcome John Citizen.

Nobles Customer Pty Ltd
49 Test Street
Demoville, TC, 9635

HOME | EQUIPMENT LIST | SIGN OUT

MY LIFTING EQUIPMENT

Show/hide search options

Equipment Search
The equipment list may be restricted using the filter options (highlighted) * and ? wild cards may be used in last-entry fields.

Sort by: Barcode Asc

Barcode:

Equipment Type:

Status: All Statuses

Test Cert. No.:

ID Number:

Location: All Locations

Include disposed assets

First

Barcode	ID Number	Equipment Type	Description	Location
4783564	NCS01-005	Wire Rope Sling - Single Leg	14mm 6 x 36 IWRC G1770	Assembly Area
4783565	NCS01-008	Chain Sling - Multi Leg	Grade T 10mm x 1 leg, 3.2 t	Assembly Area
4783566	NCS01-009	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area
4783567	NCS01-004	Chain Sling - Multi Leg	Grade T 8mm x 2 leg, 3.5 t @ 60°	Assembly Area
4783568	NCS01-010	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area
4783569	NCS01-011	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area
4783570	NCS01-012	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area
4783571	NCS01-003	Chain Sling - Multi Leg	Grade T 10mm x 1 leg, 3.2 t	Assembly Area
4783572	NCS01-002	Chain Hoist	2.0 t x 3m	Assembly Area
4783573	NCS01-007	Chain Sling - Multi Leg	Grade T 10mm x 2 leg, 5.5 t @ 60°	Assembly Area
4783574	NCS01-013	Concrete Lifting Clutch	Swift-Lift 10.0 t	Factory
4783575	NCS01-014	Crane	Davitt	Factory
4783576	NCS01-016	Crane	Gartry	Factory

Customer Site#1
Nobles Customer Pty Ltd.
48 Test Street
Demoville, TC, 9635



Lifting Equipment • Data Management

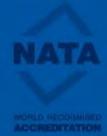
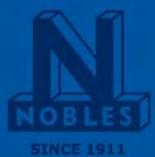


Barcode	ID Number	Test Cert	Equipment Type	Description	Location	Status	Exp. Date	Comments
4783564	NCS01-005	NMB9970	Wire Rope Sling - Single Leg	14mm 6 x 36 IWRC G1770	Assembly Area	B	2011/2009	
4783565	NCS01-008	NMB9990	Chain Sling - Multi Leg	Grade T 10mm x 1 leg, 3.2 t	Assembly Area	B	2011/2009	Log of equipment condition attached
4783566	NCS01-009	NMB9990	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area	B	23/02/2010	
4783567	NCS01-004	NMB9990	Chain Sling - Multi Leg	Grade T 8mm x 2 leg, 3.5 t @ 60°	Assembly Area	B	25/03/2010	
4783568	NCS01-010	NMB9990	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area	B	2011/2009	
4783569	NCS01-011	NMB9990	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area	B	2011/2009	
4783570	NCS01-012	NMB9990	Wire Rope Sling - Single Leg	24mm 6x36 IWRC B1770 with Soft Eye Each End	Assembly Area	D	2011/2009	Wiring badly damaged
4783571	NCS01-003	NMB9990	Chain Sling - Multi Leg	Grade T 10mm x 1 leg, 3.2 t	Assembly Area	B	25/03/2010	
4783572	NCS01-002	NMB9990	Chain Hoist	2.0 t x 3m	Assembly Area	B	2011/2009	
4783573	NCS01-007	NMB9990	Chain Sling - Multi Leg	Grade T 10mm x 2 leg, 5.5 t @ 60°	Assembly Area	A	2011/2009	
4783574	NCS01-013		Concrete Lifting Clutch	Swift-Lift 10.0 t	Factory	B	25/03/2010	
4783575	NCS01-014		Crane	Davitt	Factory	B	25/03/2010	
4783576	NCS01-016		Crane	Gartry	Factory	B	07/10/2009	
4783577	NCS01-017		Crane	JB	Factory	B	25/03/2010	
4783578	NCS01-018		Crane	JB	Factory	B	25/03/2010	
4783579	NCS01-019		Engineered Product	Fork Type Patel Lifter	Factory	B	25/03/2010	
4783580	NCS01-020		Engineered Product	Oxy-Acetylene Bottle Lifter	Factory	B	25/03/2010	
4783581	NCS01-021		Eyebolt/Eyelet	Collared M2 x 2.0 t	Factory	Z	25/03/2010	
4783582	NCS01-022		Clevis Clamp	3t	Factory	B	25/03/2010	
4783583	NCS01-023		Globe Trolley	21 Gload	Factory	D	25/03/2010	

Key to equipment status
A: No Visual Defects, **B:** Satisfactory, **C:** Rectification required, **D:** Non-Conforming, **Z:** Could not locate
 For Height Safety Equipment: **P:** Pass, **F:** Fail

A. NOBLE & SON LTD.
World Class Lifting Solutions

www.tech-inspect.com.au



Davis Langdon Certification Services





TECH INSPECT

Lifting Equipment • Data Management

HOME | EQUIPMENT LIST | SIGN OUT

Welcome Steve Ober.

Current Tag Colour: Green

Quarterly Inspections

BAE Systems - Defence Logistics

Bld 178 Warradale Barracks, Oaklands Rd,

WARRADALE, SA, 5046

MY LIFTING EQUIPMENT

Show/hide search options

Equipment Search
The equipment list may be restricted using the filter options (right), * and @ wild cards may be used in text-entry fields.

Sort by:

Barcode Asc

Location:

All Locations

Include disposed assets

Barcode:

Equipment Type:

Status:

Test Cert. No.:

ID Number:

All Statuses

Search

- Status Key
- A No Visual Defects
 - B Satisfactory
 - C Rectification Required
 - D Non - Conforming
 - Z Could Not Locate
 - P Pass (Height Safety Only)
 - F Fail (Height Safety Only)

First Previous Next Last Print List Export

Barcode	ID Number	Equipment Type	Description	Location	Status	Last Insp.	Next Insp.
251648	BAE13	Chain Sling - Multi Leg	Grade T 7mm x 2 leg	Workshop	B	13/04/2013	13/07/2013
305571	BAE2	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013
307418	W1033-0425	Webbing Sling	3 t x 2.5m	Workshop	B	13/04/2013	13/07/2013
307419	BAE38	Round Sling	2 t x 2m	Workshop	B	13/04/2013	13/07/2013
307420	BAE17	Round Sling	2 t x 2m	Workshop	B	13/04/2013	13/07/2013
307422	BAE18	Round Sling	2 t x 2m	Workshop	B	13/04/2013	13/07/2013
307423	BAE28	Round Sling	2 t x 2m	Workshop	B	13/04/2013	13/07/2013
307424	BAE31	Webbing Sling	2 t x 2m	Workshop	B	13/04/2013	13/07/2013
307426	BAE23	Round Sling	20 t x 3m	Workshop	B	13/04/2013	13/07/2013
307427	BAE3	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013
307428	BAE5	Lever Hoist	1.5 t x 3.0m	Workshop	B	13/04/2013	13/07/2013
307433	BAE38	Round Sling	2 t x 1.5m	Workshop	B	13/04/2013	13/07/2013
307434	BAE32	Webbing Sling	2 t x 1.5m	Workshop	B	13/04/2013	13/07/2013
307435	BAE32	Webbing Sling	2 t x 3m	Workshop	B	13/04/2013	13/07/2013
315745	BAE25	Lifting/Spreader Beam	Engine Sling	Workshop	B	13/04/2013	13/07/2013
316741	BAE12	Chain Sling - Single Leg	Grade T 7mm x 1 leg,	Workshop	B	13/04/2013	13/07/2013
316775	BAE24	Lifting/Spreader Beam	Engine Sling	Workshop	B	13/04/2013	13/07/2013
316854	BAE26	Lifting/Spreader Beam	Engine Sling	Workshop	B	13/04/2013	13/07/2013
316895	BAE14	Chain Sling - Multi Leg	Grade T 7mm x 2 leg	Workshop	B	13/04/2013	13/07/2013
316914	BAE16	Chain Sling - Single Leg	Grade T 7mm x 1 leg,	Workshop	B	13/04/2013	13/07/2013
334053	BAE1	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013
334054	BAE4	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013



TECH INSPECT

Lifting Equipment • Data Management

HOME | EQUIPMENT LIST | SIGN OUT

Welcome Steve Ober.

Current Tag Colour: Green

Quarterly Inspections

BAE Systems - Defence Logistics

Bld 178 Warradale Barracks, Oaklands Rd,

WARRADALE, SA, 5046

MY LIFTING EQUIPMENT

Show/hide search options

Equipment Search
The equipment list may be restricted using the filter options (right), * and @ wild cards may be used in text-entry fields.

Sort by:

Barcode Asc

Location:

All Locations

Include disposed assets

Barcode:

Equipment Type:

Status:

Test Cert. No.:

ID Number:

All Statuses

Search

- Status Key
- A No Visual Defects
 - B Satisfactory
 - C Rectification Required
 - D Non - Conforming
 - Z Could Not Locate
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334053	BAE1	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013
334054	BAE4	Lever Hoist	1.5 t x 1.5m Torque Tube Puller	Workshop	B	13/04/2013	13/07/2013

Tech Inspect

Tech Inspect display boards

- Fool-proof identification of which equipment is compliant at a glance
- Accommodates two types of equipment
- Displays date of last inspection
- Displays date of when next inspection is due



**Absolute focus on
safety and quality in
every area, every time**

Our mission is clear

Zero tolerance for lifting and
rigging incidents



Certifications & Accreditations



At Nobles **Safety & Quality** are core values and integral to the products we manufacture, merchandise and services that we provide.

As such we have certification in the following management systems.

- ISO 9001 Quality Management System
- AS/NZS ISO 14001 Environmental Management System
- AS/NZS 4801 Workplace Health & Safety

We have NATA & DNV accredited testing laboratories around the country.

And are members of LEEA 'Lifting Equipment Engineers Association' providing support in the compliance of Australian regulations and standards.

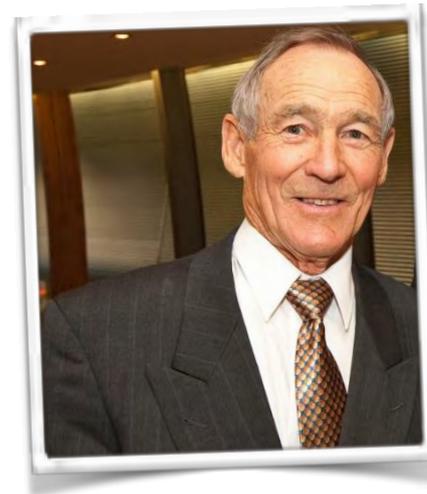
More than just setting the standards

Nobles is helping to create and improve Australian standards



Charles Bell,

Nobles Senior Engineer



Jeff Rogers,

ME025 Committee Chairman

An integral part of the standards committee – ‘Lifting Tackle Standard ME025’



Davis Langdon Certification Services



Quality and safety focused

- Nobles Tech Inspect staff carry an accreditation card
- This provides peace-of-mind and instant confirmation of suitability to undertake the required tasks



**APPROVED
TESTING &
INSPECTION OFFICER**



The holder of this card has been approved by A. Noble & Son Ltd to conduct testing and inspections as listed on the reverse of this card.

Names: Graeme Beard
Expiry Date: 1 November 2014



A. NOBLE & SON LTD.
World Class Lifting Solutions
TECH INSPECT

Approved to undertake the following work:

- Testing & Inspection of Lifting Equipment
- Inspection of Height Safety Equipment
- Tech Inspect
- Wire Rope Non Destructive Testing
- Nobles Approved Signatory - Certified Visual Inspections
- Nobles Approved Signatory - Mechanical Testing
- Nobles Approved Signatory - Wire Rope NDT

**For verification regarding the above,
call 1300 711 559.**



Davis Langdon Certification Services



Products Nobles service & repair

The background of the slide is a silhouette of a large industrial crane structure, possibly a gantry crane, against a purple and blue sky. The crane's complex framework of beams and cables is visible, and it appears to be positioned over a large, dark, rounded object, likely a ship's hull or a large storage tank. The overall scene is industrial and dramatic due to the lighting.

- Chain slings
- Wire rope slings
- Chain hoists
- Lever hoists
- Forklift jibs
- Goods Cages
- Lifting beams
- Spreader bars
- Specialised material handling equipment
- Height safety equipment
- Custom items

Service & repair

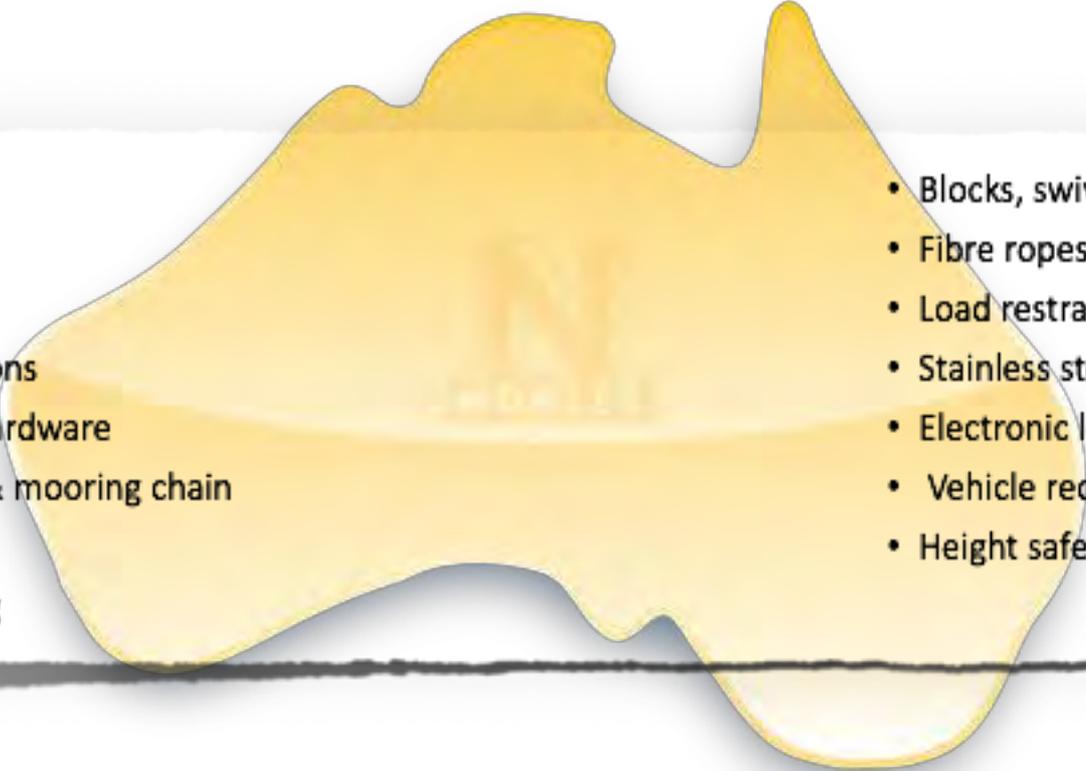


Full mobility to come to you,
no matter where you are



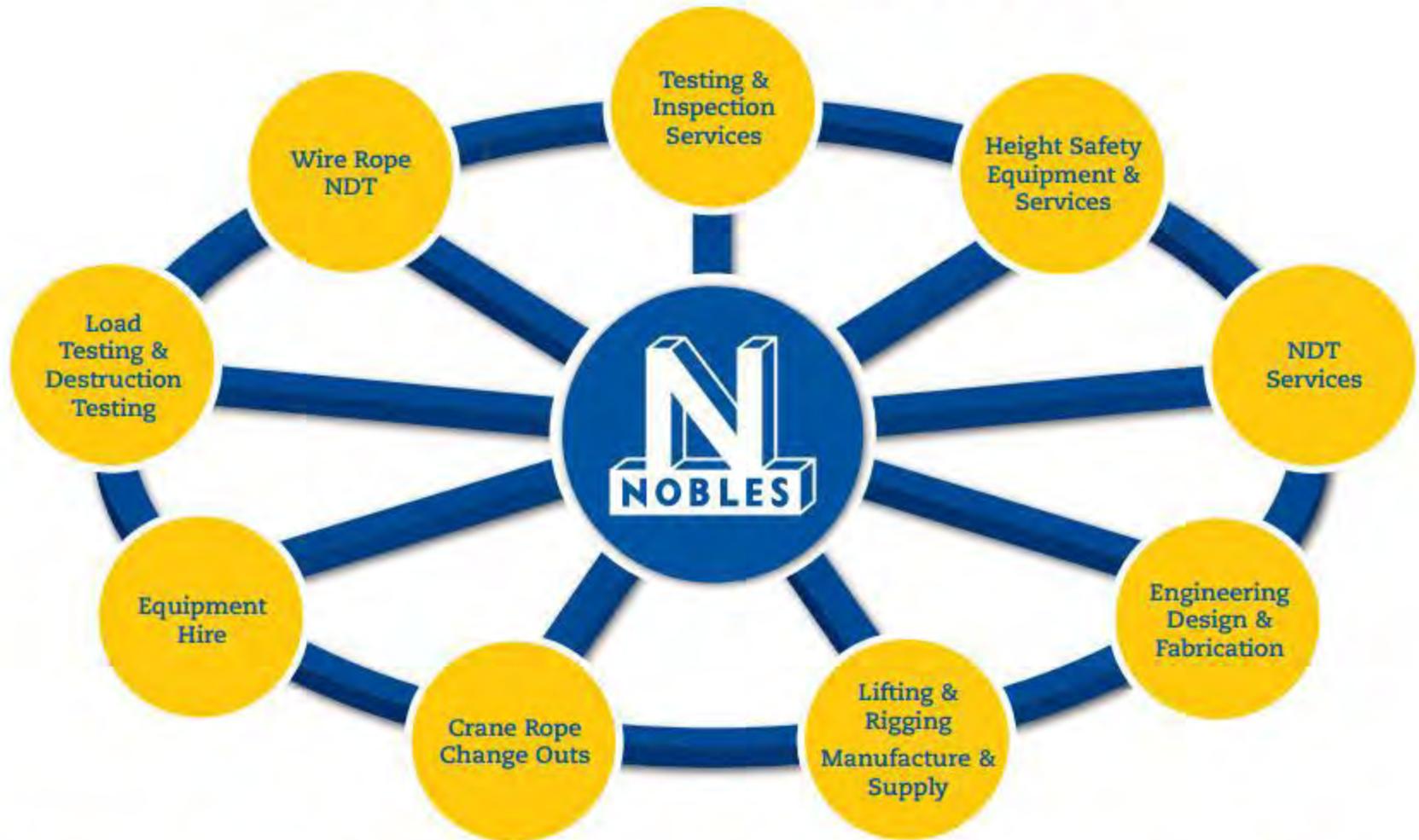
Product range and availability

Stocked and available nationwide

- 
- Wire rope
 - ▶ strand
 - ▶ lubricants
 - ▶ terminations
 - Lifting & rigging hardware
 - General purpose & mooring chain
 - Hoists & winches
 - Materials handling
 - Blocks, swivels & sheaves
 - Fibre ropes
 - Load restraint products
 - Stainless steel rigging
 - Electronic load measuring
 - Vehicle recovery products
 - Height safety equipment

NOBLES

The Complete Solution for



Lifting, Rigging, Services and Engineering Design



Response times

After hours emergencies and support

You will have dedicated contacts who can respond quickly

They are available via mobile phones after hours

Included are senior members of our teams and technical staff



Example of a site specific “Emergency Contact List”

Whyalla

After hours contacts

Branch Manager

Jeff Morton: 0409 146 927

SA/NT Sales Manager

Michael Gancarz: 0417 890 970

SA/NT State Manager

Mike Golley: 0411 416 488



Our strategic business partners



Height Safety Equipment



National warehousing & logistics



**Nobles provides peace-of-mind for supply
through national warehouses and
distribution chains**

Components we stock

- Wire rope
 - ▶ strand
 - ▶ lubricants
 - ▶ terminations
- Lifting & rigging hardware
- General purpose & mooring chain
- Hoists & winches
- Materials handling
- Blocks, swivels & sheaves
- Fibre ropes
- Load restraint products
- Stainless steel rigging
- Electronic load measuring
- Vehicle recovery products
- Height safety equipment

What sets us apart



What sets us apart

Nobles has been regularly supplying lifting, rigging, special engineered products with test & inspect service support to the Australian defence forces.



AS/NZS 4801
Certified
AS/NZS ISO 14001
Certified

Davis Langdon Certification Services



What sets us apart

Our Engineering Expertise across Australia

- Design and build
- Proof load testing
- Assessing and upgrading existing designs
- Lift planning and consultation
- Strip down, clean and inspection
- Assessing suitability for repair of damaged elements
- Performing non-destructive examination for cracks and or other flaws
- Assessing dimensional wear against loading requirements
- Re-painting, zinc plating, galvanising or other surface treatments as required



What sets us apart

- Big Lift

- Largest test bed in Australia
- NATA accredited testing to 1,000 tonnes capacity over 40m length
- 2,500 tonne wire rope swaging press



- Australian Manufacturing

- Rigging screws and turnbuckles forged in Adelaide
- Lifting Beams, Baskets, Goods Cages
- Blocks, Hooks, Swivels



- Electronics

- Custom design of load cells
- Crane display and monitoring
- NATA accredited calibration of load measuring equipment



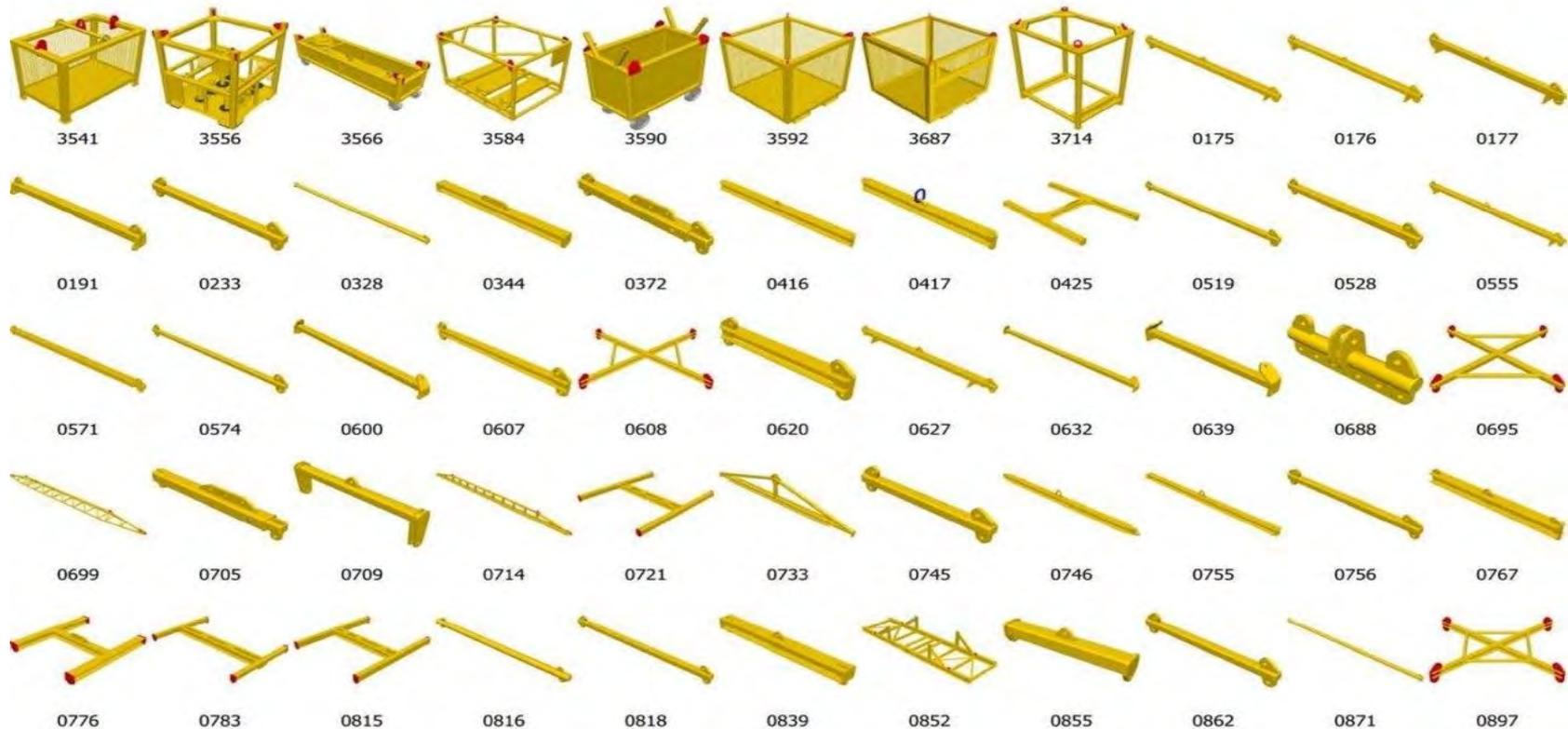
What sets us apart

- NDT (Non Destructive Testing)
 - Custom design of load cells
 - Crane display and monitoring
- Crane Servicing
 - General periodic inspections
 - 3rd party inspections
 - 10 and 25 year major services
- Water Weights
 - Rigging screws and turnbuckles forged in Adelaide
 - Lifting Beams, Baskets, Goods Cages



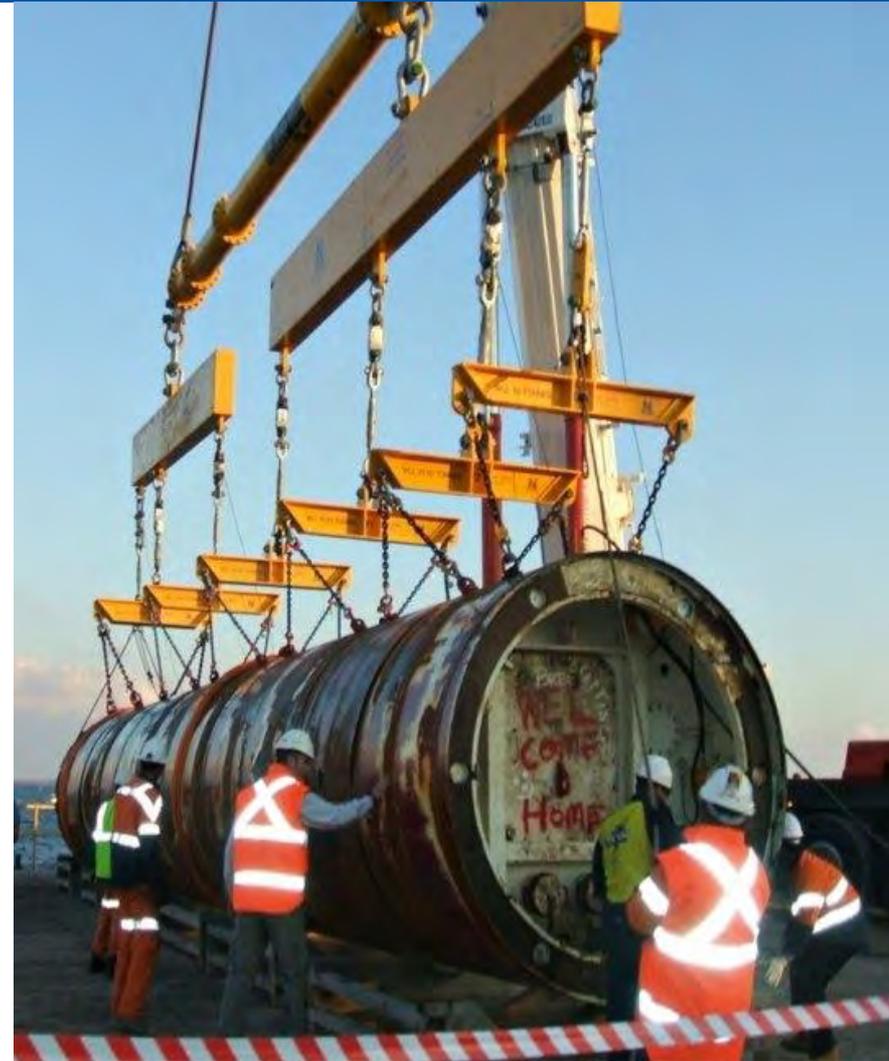
More than products on the shelf

- **Engineered Products** – We make a wide variety of equipment across all facets of lifting and rigging.

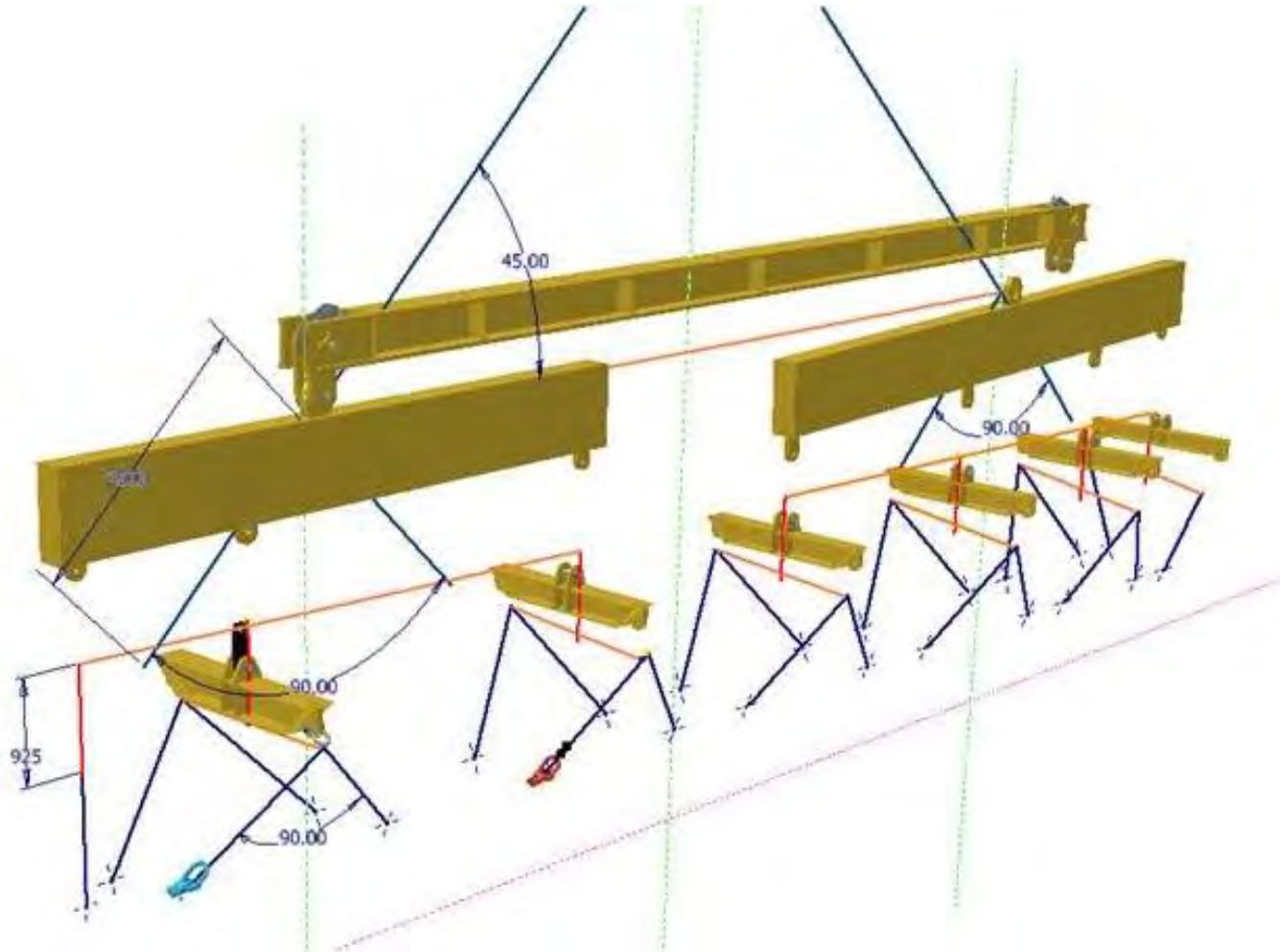


Tunnel boring machine lift

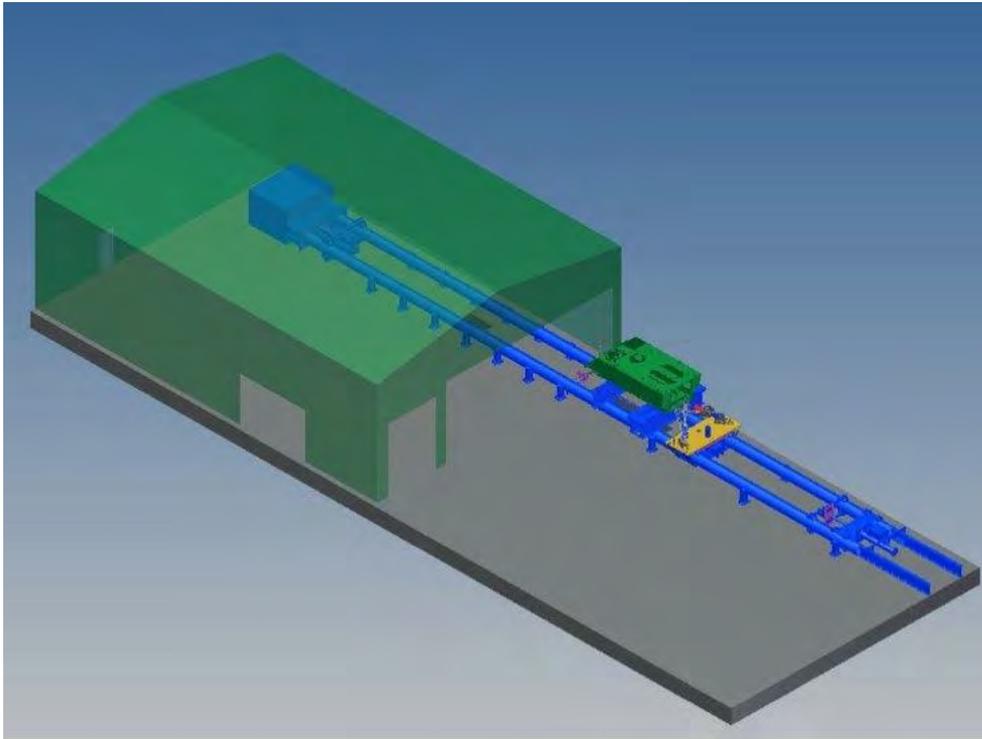
- Nobles consulted in the planning and design for the lift of a complete and submerged 150 tonne tunnel boring machine, the first lift of its kind.
- Nobles assisted in determining the lifting method, required equipment and rigging, including a custom lifting beam assembly.
 - 3 wire rope slings
 - 9 custom beams
 - 28 chain slings



Tunnel boring machine lift



Innovations - APC Tie Down Test



**1000t and 150t Test bed Facilities
Adelaide**

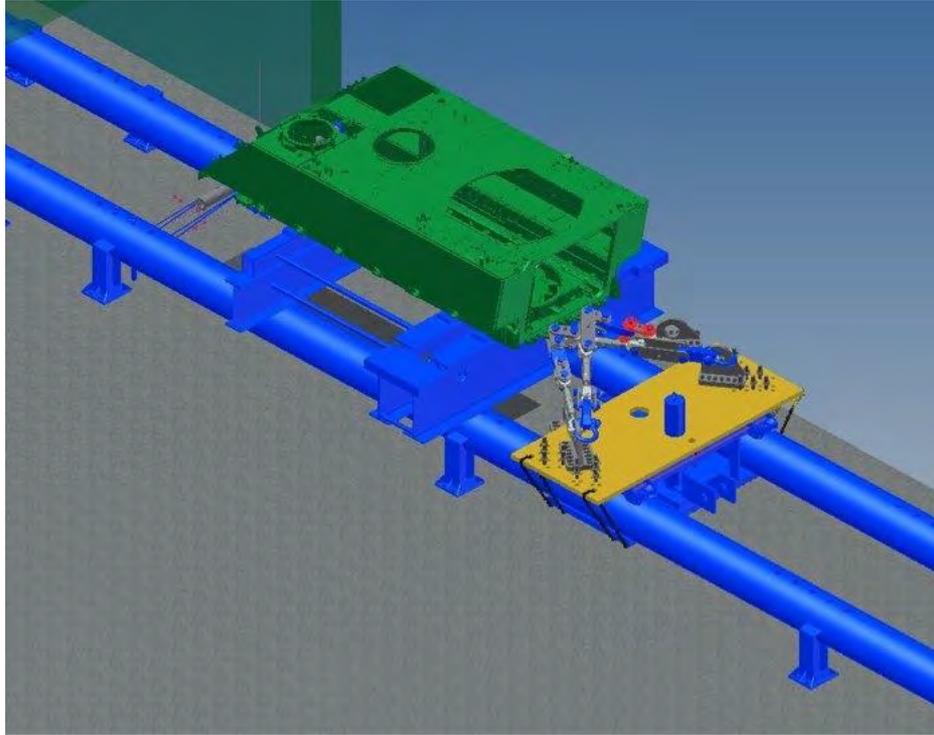
The challenge

Develop a test rig with strict parameters regarding the geometry and test loads, to simulate tie down facilities for the transport of Armoured Personnel Carriers (APC's).

We used a 3D model of our 1000t test bed, and dropped a model of the APC, to define the tooling and geometry of the rigging.

This allowed the full scope of tooling to be procured ahead time to allow effective use of testing facilities, to the satisfaction of the customers engineers.

Innovations - APC Tie Down Test



APC Hull Test Geometry

This project included

Collaboration with customers engineers to define test parameters and procedures

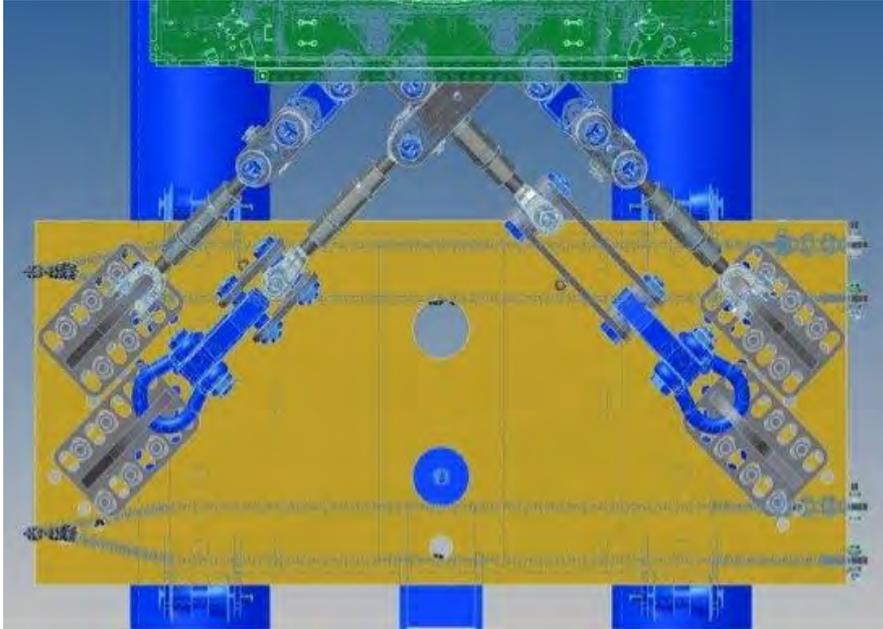
Determination of test feasibility and methodology.

Visiting customers site to identify test scope and highlight potential issues.

An extensive 3D design process to define all required tooling and load measurement instruments, and to plan site test work.

On site testing with customers own strain gauge and elongation measurement devices in a safe operating environment.

Innovations - APC Tie Down Test



Typical 3D model with photograph of test rigging on 1000t test bed carriage.



Innovations- APC Tie Down Test

PARTS LIST					PARTS LIST						
ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	MASS	ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	MASS
1	2	NP042-50T LOAD CELL ASSY (NOBLES)	50 TONNE LOAD CELL C/W KSBFG63 SHACKLES		130.0 kg	25	20	NP042-AM8 ROD-02	M48 Threaded Rod	GRADE 8.8	5.7 kg
2	2	NP042-75T LOAD CELL (NOBLES)	75 TONNE LOAD CELL		52.8 kg	26	40	NP042-NUT-AS1112-M48-Type6	M48 Hex Nut - AS1112 (2)	GRADE 8.8	1.0 kg
3	10	NP042-KSBFG63-PIN ASSY (NOBLES)	55t 'Green Pin' c/w Safety Pin (AS 2741) - (From Grade 'S' Bow Shackle)		12.4 kg	27	40	NP042-WASHER-AS1237-M48	M48 Flat Metal Washer	Steel	0.3 kg
4	4	NP042-KSBFG75-PIN ASSY (NOBLES)	85t 'Green Pin' c/w Safety Pin (AS 2741) - (From Grade 'S' Bow Shackle)		19.9 kg	28	1	NP042-HOLLOW BAR-01	180mm OD x 100mm ID HOLLOW BAR (#70 MPa Min Yield)	Grade 470	414.8 kg
5	2	NP042-BEAM-02 (NOBLES)	SHS 65 x 65 x 5	AS1163-360	22.7 kg	29	4	NP042-SU082-RIGGING SCREW-STD	M54 JAW-JAW RIGGING SCREW		67.6 kg
6	2	NP042-BEAM-03 (NOBLES)	SHS 65 x 65 x 5	AS1163-350	23.5 kg	30	2	NP042-SU088	NUTP33JU - M33 Turnbuckle - Grade P - Jaw & Jaw - AS2319		12.3 kg
7	10	NP042-PACKER PLATE-01 (NOBLES)	200 x 25 FLAT BAR	AS3078-250	23.6 kg	31	2	NP042-KSBFG25	8.5t 'Green Pin' Grade 'S' Bow Shackle c/w Safety Pin (AS 2741)	VAN BEEST	2.7 kg
8	2	NP042-PACKER PLATE-02 (NOBLES)	200 x 20 FLAT BAR	AS3078-250	17.3 kg	32	370	NP042-CMAC16	CMAC16 - 16mm Lifting Chain - WLL 8t	AS2321-GRADE T	0.3 kg
9	4	NP042-ROUND SLING-01 (NOBLES)	WR2500T - Noblotech Round Sling - WLL 25t - 6m Long - 132mm Wide Sleeve - AS4497	Round Sling	10.8 kg	33	4	NP042-CMAH16N	CMAH16N - 16mm Chain Connector - WLL 8.0t - Grade T - AS3776	Steel	1.3 kg
10	1	NP042-TOOLING MOUNT PLATE-01	70 THK PLATE - FLAME CUT PFOFILE	AS3078-250	2731.1 kg	34	8	NP042-DELM16	M16 Collared Eyebolt - WLL 0.8t - AS 2317	AS2317-Steel	0.3 kg
11	4	NP042-LUG-02	32 THK PLATE	BISALLOY 80	3.5 kg						
12	2	NP042-LUG-04	50 THK PLATE	BISALLOY 80	36.4 kg						
13	2	NP042-LUG-05	50 THK PLATE	BISALLOY 80	59.0 kg						
14	4	NP042-MOUNT PLATE-02	70 THK PLATE	BISALLOY 80	83.8 kg						
15	6	NP042-PACKER-01	10 THK PLATE	AS3078-250	11.9 kg						
16	6	NP042-PACKER-02	12 THK PLATE	AS3078-250	14.3 kg						
17	4	NP042-LINK-03	32 THK PLATE	BISALLOY 80	12.5 kg						
18	4	NP042-LINK-04	32 THK PLATE	BISALLOY 80	12.2 kg						
19	4	NP042-LINK-05	32 THK PLATE	BISALLOY 80	12.8 kg						
20	2	NP042-LINK-06	32 THK PLATE	BISALLOY 80	28.8 kg						
21	2	NP042-LINK-07	32 THK PLATE	BISALLOY 80	28.4 kg						
22	48	NP042-WASHER-75x10-01	10 THK PLATE	BISALLOY 80	1.0 kg						
23	12	NP042-WASHER-75x10-02	10 THK PLATE	BISALLOY 80	0.5 kg						
24	44	NP042-WASHER-90x10-01tpt	10 THK PLATE	BISALLOY 80	0.9 kg						

4 SLING TEST - 90 DEG (1:75)

VIEW C (1:25)

VIEW A (1:75)

EXISTING NOBLES 100t TEST BED PIPE STRUCTURE
EXISTING NOBLES TEST CARRIAGE

LARGE WHEEL BASE APC (SHOWN)
SMALL WHEEL BASE APC (TO BE TESTED)

CUSTOMER APPROVAL:
SIGNED: _____
NAME (PRINT): _____
COMPANY/DEPT: _____
DATE: _____

NOTES:
1. ALL STEEL TO BE AS3078-GRADE 250 OR AS3078-300 UNO, ALL RHS TO BE AS1163-GRADE 350 UNO.
2. ALL WELDS SHALL BE SAW CONTINUOUS FILLET OR FULL PENETRATION BUTT WELDS IN ACCORDANCE WITH AS1554.1 CAT SP OR AS1554.4 CAT SP UNO AS APPROPRIATE.
3. GENERAL FABRICATION TOLERANCES AS PER AS1290-1993 SECT. 10 APPLY UNO, GENERAL MACHINING TOLERANCE OF ±0.2MM UNO APPLIES. ALL LASER CUTTING TO BE ±0.2MM UNO, ALL CNC PROFILE CUTTING TO BE ±0.1MM OR ±0.2% OF PLATE THICKNESS FOR PLATES 50mm OR THICKER.
4. ITEMS 1 TO 8 AND ALL OTHER ITEMS SHOWN IN BLUE ON THIS DRAWING REMAIN THE PROPERTY OF A. NOBLE & SON LTD.

REV	DESCRIPTION	DRN	ENG	DATE
1	ISSUED FOR MANUFACTURE	MKE	VJ	24/04/2012
2	ISSUED FOR QUOTATION	MKE	VJ	17/04/2012
3	PRELIMINARY, ISSUED FOR REVIEW	MKE	VJ	11/04/2012
0	ISSUED FOR QUOTATION	MKE	VJ	20/03/2012
1	PRELIMINARY, NOT FOR MANUFACTURE	MKE	VJ	07/03/2012

IF IN DOUBT - ASK!		DO NOT SCALE!	WORK ONLY FROM APPROVED COPIES!
		2012 © A. NOBLE & SON LIMITED THIS DRAWING IS PROTECTED UNDER THE AUSTRALIAN COPYRIGHT ACT AND THE COPYRIGHT REMAINS WITH A. NOBLE & SON LIMITED UNLESS OTHERWISE SPECIFICALLY STATED. UNAUTHORIZED COPYING IS PROHIBITED. THIS DOCUMENT SHALL NOT BE TRANSMITTED IN WHOLE OR IN PART TO UNAUTHORIZED PARTIES WITHOUT THE WRITTEN PERMISSION OF A. NOBLE & SON LIMITED.	APC TIE DOWN TEST - FOR BAE GENERAL ARRST - 90 DEG TEST NP042
REVISION HISTORY			REV. SHEET A 1 of 1

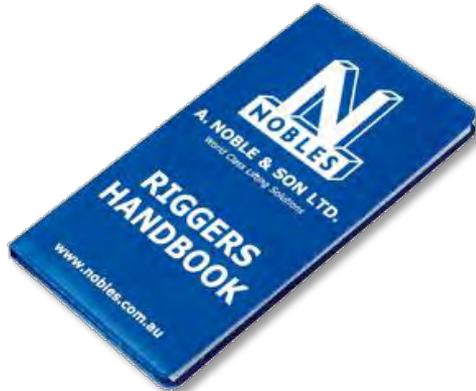
Innovations



Testing of Customers Own Goods on Site

Site Testing of Navy Radome on Site.

Information & resources



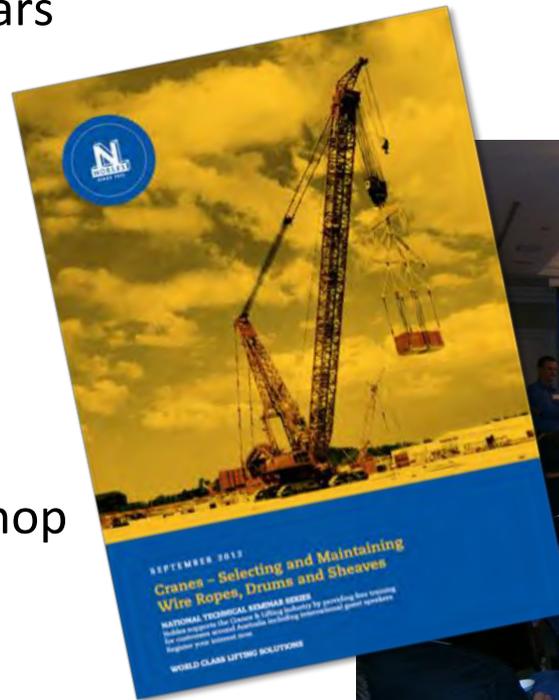
AS/NZS 4801 Certified
AS/NZS ISO 14001 Certified
Davis Langdon Certification Services



Training and Education

Nobles offers a range of training and education services, including:

- Technical Training Seminars
- Safety In Lifting (2-3 hrs)
- Tool Box Talks
- Hands on workshops
- Wire rope socketing
- Inspection of lifting gear
- Load Equalisation Workshop



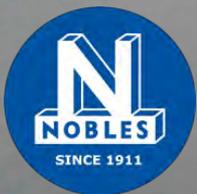
Training and education

Other technical training and services

- Conduct audits of our clients lifting procedures
- Investigate workplace incidents (lifting)
- Review and advise on existing lifting procedures (client specific)
- Create training and work procedures for non-standard lifts



Thankyou



The greatest success comes from partnering with our clients,
working to a common plan, for a common goal



Whyalla Workshop



As a visitor to our premises we welcome you and are pleased to have the opportunity to showcase our facility and capability.

This is a working heavy engineering environment and we require your assistance in making your visit a safe one.

Please be aware of the following hazards while moving through our workshop:

- Mobile plant including trucks, forklift and cranes
- Overhead cranes
- Rails embedded in the floor
- Grinding, welding, oxy-acetylene and plasma cutting
- Cutting and metal forming plant

We require all visitors to wear a high visibility vest and clear safety glasses.

Safety boots/shoes are also required if moving away from the centre walkway

Hearing protection ear plugs are available from the dispenser adjacent to the workshop entrance.

Should you have any questions or concerns or wish to have a closer look at any area please ask your guide for assistance



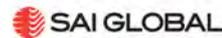
Trained, skilled, experienced and ready to meet your current and future requirements



Quality
ISO 9001



Health & Safety
AS 4801



Environment
ISO 14001



The Ottoway Fabrication Management Systems have been structured on five primary levels and based on the requirements of ISO 9001:2008, AS/NZS 4801, ISO 14001, Company Policies and Customer expectations.

E&A Limited is registered as a self-insured employer pursuant to section 60 of the Workers Rehabilitation & Compensation Act 1986 (SA) (WRCA). As such, E&A Limited and all business in the E&A Limited Group (self-insurance status only applies in South Australia) are required to fund and manage their own workers compensation claims. The registration is subject to strict compliance with the WRCA, Work Health and Safety laws and oversight by WorkCoverSA. All businesses in the E&A Limited Group are also covered by Excess Employers Liability Reinsurance, a copy of the Certificate of Reinsurance is available upon request.



The E&A Limited Group of Companies can provide a full range of services to meet Customers' requirements in manufacturing, production, planning, maintenance, project management, tendering, strategic sourcing and capital works



Heavy Engineering, Fabrication and Site Services



BLUCHER
Australia

Pipe Fabrication & Installation



Corporate Advisory Services



Quarry & Mining Equipment Supply & Servicing



Electrical & Instrument Installation, Construction & repairs



Heavy & Light Machining & Refurbishment



Pipe Fabrication & Installation



Geomembrane Liners & Floating Covers



Electrical & Instrument Installation, Construction & repairs

E&A Limited's services are used by many major organizations to reduce plant-operating costs and increase plant availability. This is achieved through application of our expertise in Engineering, Design, Materials selection, Manufacturing Management, Procurement and Supply systems.

The E&A Group also has a strong track record supplying components and complete solutions for major projects. This has included large tanks, conveyors, hoppers, pressure vessels, piping, ducting, electrical services, structural steel and fabricated sections for mining, processing and infrastructure clients.

Our current work force includes in excess of 800 front line personnel including specialist welders, electricians, pipe fitters, boilermakers, sheet metal workers, mechanical fitters, riggers, trades assistants, apprentices and stores.

With approximately 160 skilled personnel, the combination of practical experience and technical expertise applied across the full range of Engineering and Manufacturing functions and a focus on delivering value to all key stakeholders is the cornerstone of our operations.

Our combined Corporate ownership structure also guarantees access to resources, processes and facilities.

Our Mission is...

- To be Australia's leading service provider of integrated manufacturing services to key industries including heavy engineering, mining, defence, water, energy and renewable resources sectors;
- To use our expertise as a prime contractor to deliver value to our customers in design, engineering, manufacturing, project management, procurement and on-site services;
- To create stakeholder value through our skilled and dedicated workforce and shared commitment to safety, quality and the environment.

Our Shared Values are...

Our Customers are our Business

- Listen to and understand their requirements;
- We satisfy our customers through proactive, timely and cost effective job delivery;
- Delivery of continuous quality improvement and innovation with all of our services;
- Help our customers succeed now and in the long-term through our own performance

We achieve through people and teamwork

- The work we perform is safe, productive and valued;
- We continue to invest in developing our workforce skills;
- We are open, honest and respectful of each other;
- We listen to our people and help them achieve their life goals;
- We communicate and celebrate our achievements.

Our Shared Values are...

Success is our driver

- Create a winning attitude;
- Set challenging goals and deliver on commitments;
- Seek new ideas and manage risks proactively;
- Deliver on budget, on time and fit for purpose;
- Be innovative and resourceful.

We are committed to Zero Harm to people, customers, suppliers, communities, facilities and the environment;

- All incidents are promptly reported without exception;
- We communicate our obligations;
- We continuously improve our safety performance;
- Always act with integrity and respect for the communities in which we operate;
- Incident prevention is demanded, expected and managed by all of us;

Zero Harm is everyone's responsibility.

A LARGER RANGE OF SERVICES

Ottoway Fabrication offers its services to the following Market segments;

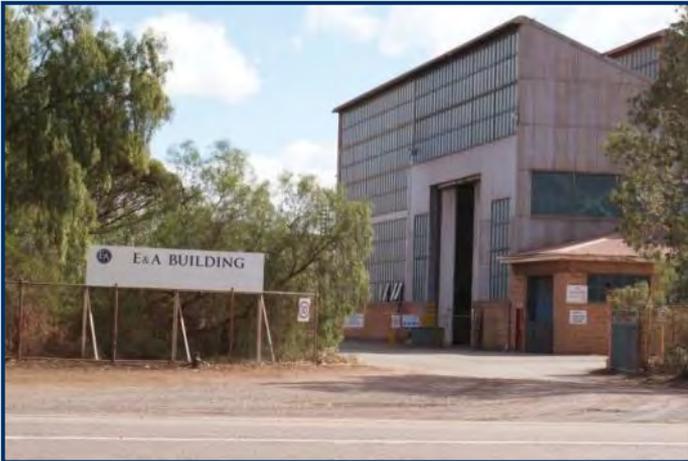
- Mining
- Mineral processing
- Light, Medium & Heavy engineering
- Power generation
- Defence
- Water Industry
- Transport
- Manufacturing.





**COMPANY
CAPABILITIES**

 **OTTOWAY
FABRICATION**



WHYALLA WORKSHOP



**11,500 square metres of
undercover workshop
space**



**16.5 metres under hook
height**



**Workshop
Overhead
Cranes**

- 1 x 100 tonne**
- 1 x 48 tonne**
- 1 x 40 tonne**
- 2 x 25 tonne**
- 2 x 20 tonne**
- 2 x 9 tonne**

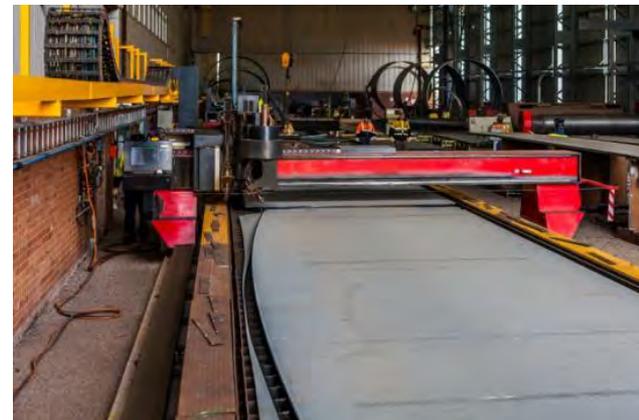


WORKSHOP EQUIPMENT

2off Kinetic 3000 CNC Profile Cutters



Machine 1 - 3.2m x 17m bed. Triple bevel gas cutting head, plasma and drill
Machine 2 - 3.2m x 27m bed. Bevelling plasma cutting head



WORKSHOP EQUIPMENT



Two NC controlled Steel Plate Pyramid Rolls - width capability 3200mm, thickness capability 50mm and 80mm including cones. Four roll design removes the need to preset plates

WORKSHOP EQUIPMENT



Section cropper and punch press



Horizontal and Vertical Section Rolls, Capacity – 100 x 100mm Angle, 100mm Flat Bar & 180NB pipe



Plate guillotine 3100mm wide x 16mm thick



WORKSHOP EQUIPMENT

40metre Blast Booth, 40metre
& 80metre paint booths



6 Hectare Site with
direct Highway access
to Pt Augusta Road



Heavylift 40m Straddle
Carrier – 110 tonne
Lift & Carry





**Grizzly
Support
Beams For
BHPBilliton
Olympic
Dam**



**Blast
Furnace
Shell For
Onesteel**

New Saltwater Mains for Onesteel



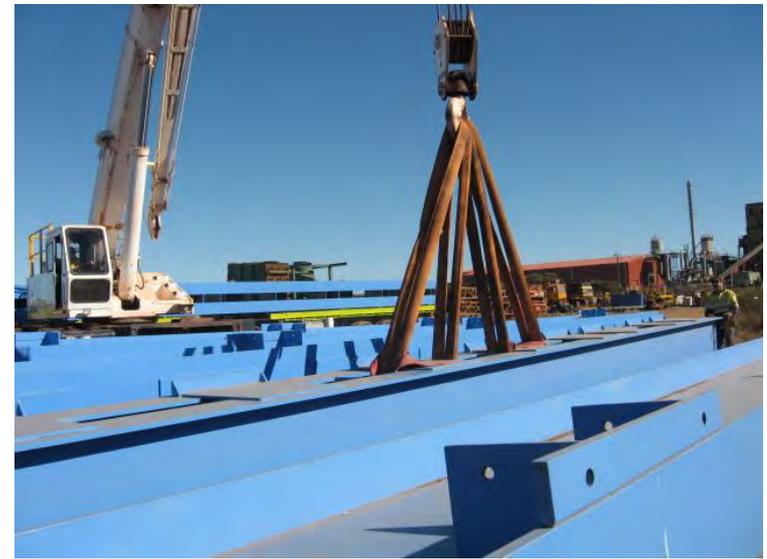
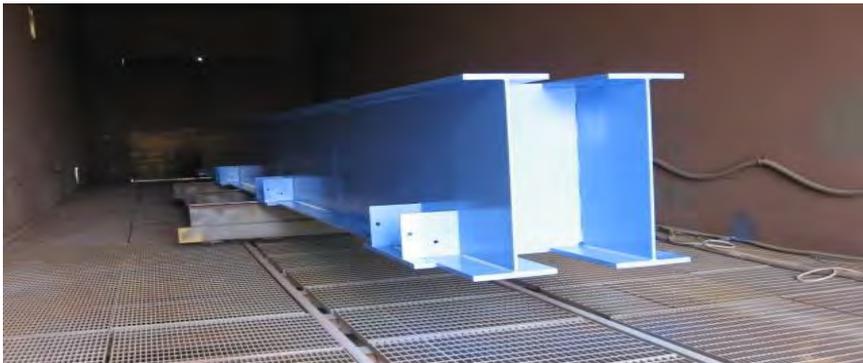
Air Warfare Destroyer Project
Exclusive supplier of all pre-fabricated Hull, Wall and
Weldment sections to ASC Adelaide



DIVERSE PROJECT EXPERIENCE



Air Warfare Destroyer Project Supplier of fabricated Ship Hardstand Support Steel



Series production of API650 standard storage tanks



Ship Loader and Conveyor For Onesteel Wharf



DIVERSE PROJECT EXPERIENCE



Wind Tower Manufacture



DIVERSE PROJECT EXPERIENCE



WHYALLA WORKSHOP



Tower
Storage

Oil Storage Tanks



Onesteel Ore Bins



**16m x 4.5m
Vertical Kiln
for Penrice**

New Underground Ore Car for Xstrata MtIsa



Hopper & Conveyor supports at Iron Duke Mine



OST BOS Duplex Stainless Steel Precipitator Ducting

Pulse Columns Roxby Downs



Wharf Coke Stockbridge Boom



BHPB OD DSE3 Platform & Handrails



OST Project Magnet Ore Bin

75 tonne BOS Steel Car Fabrication, Line Boring and Mechanical Fitting.



Fabrication



Mechanical Fitting



75 tonne BOS Steel Car Fabrication, Line Boring and Mechanical Fitting.



Fully Qualified Welders



Site Installation Services



PAST PROJECTS



Cat 785 TRUCK TRAYS 2013

Large sized projects accommodated with ease



PAST PROJECTS



Cat 793 TRUCK TRAYS 2009



Undercover painting ability



Direct access to highways



PAST PROJECTS



PROCESSING PLANT PROMINENT HILL



Specialist Tank manufacturing capability

Weld integrity assured by 3rd Party Organizations



Pressure testing



PAST PROJECTS



OTHER LARGE PROJECTS

Onesteel BOS Hood



Onesteel Blast Furnace Demisters



Nyrstar Fume Extraction Flue

OVERSIZE ROAD TRANSPORT



PAST PROJECTS



OTHER LARGE PROJECTS

Roxby Downs Furnace Hood



BHP Billiton Ore Car Refurbishment



Onesteel new Lime Kiln section



Onesteel Project Magnet

PAST PROJECTS



793 DURATRAY TRUCK BODIES 2010



Rubber lined Mining Truck Trays



Port Augusta Rd, Whyalla SA 5600

Ph: 08 8647 6600

Fax: 08 8645 2205

Bryan Tidswell

Chief Executive Officer

Andrew Hiscock

Operations Manager

0400 299 973

Tony Dinning

Workshop Manager

0418 188 524

Jay Snowden

Site Construction Manager

0428 375 095





WH&F Company Profile



Quality Certified Company
Licence Number Q0068

Whyalla Hose & Fitting Services



Introduction

Established in 1994 by directors D.C Bruce and R.W Campbell, **Whyalla Hose & Fitting Services (Aust) Pty Ltd**, is a locally owned, Quality assured ISO9001 Company, and for the past 21 years, has provided exceptional service throughout the Spencer Gulf/Eyre Peninsula Region.

With customer demand for a more responsive and efficient service provider, our expertise has grown, and while working with-in OEM standards, our mission is to provide the customer with a product, as good as and/or better than new, placing us at the forefront of engineering excellence, providing a return on your investment in us.

In today's market we have shown strong care for our customer's economic position and it is from this that we have forged many excellent relationships. With over two (2) decades experience, WH&F offer a service that you can place your trust in. Our knowledge stems from hands-on experience, unique Industry-specification expertise and importantly, our strong customer relationship.

We trust the following Profile and Capability Statement will provide the relevant details of our strength as a company, and assure you of our suitability, as a partner with your Business in the future.

Committed to Continual Improvement

Whyalla Hose & Fitting Services



Business Snapshot

- WH&F are a locally owned Engineering Company, now operating in its 21st year, employing 17 employees
- Quality Assurance ISO9001 and Achilles (Oil & Gas) Accredited
- For the past 16 years WH&F have performed Maintenance, Repair & Overhaul: (MRO): on gearboxes/rotable/mechanical spares
- Have a site service contract with Santos, Port Bonython
- Preferred service provider for compressor and mechanical repairs for past 8 years with BOC (Whyalla and Olympic Dam Operations)
- For the past 5 years WH&F have managed the Gearbox contract for supply/service with OneSteel/Arrium
- For the past 21 years WH&F have managed the Hydraulic Hose & Fitting vendor contract with OneSteel/Arrium
- Provide a year round 24/7 service for breakdown situations
- RYCO Distributor for the Eyre Peninsula region, and have RYCO 24•7 presence in Whyalla and Cowell
- In partnership with Applied Industrial Technologies, WH&F manage a Bearing and Transmission contract for OneSteel/Arrium

Coming together is a beginning. Keeping together is progress. Working together is success.

Whyalla Hose & Fitting Services



Safety - Managements Commitment

The Management of Whyalla Hose & Fitting Services are committed to ensuring, as reasonably practicable, that all employees of the business are safe from injury and risk to health while they are at work. To assist us on our journey of zero harm, zero injuries;

Whyalla Hose & Fitting Services:

- Conduct daily safety toolbox workshop meetings
- Conduct site safety toolbox meetings prior to each task
- Are in the process of obtaining AS/NZS 4801/OHSAS 18001, Safety Management System (Completion date set for June 2016)
- Have staff trained in Cert. IV Work, Health & Safety



Ross Campbell & David Bruce (WH&F Directors)

If you SEE something, SAY something. If you SAY something, DO something.

Whyalla Hose & Fitting Services



Our People

WH&F employ a workforce of 17 people at our premises in the Industrial hub of Norrie Avenue, Whyalla. Our people are our key asset and our overriding principle is that every employee must arrive home safely, in good health, after a working day.

Training has always been a high priority at WH&F, coupled with a wide range of educational programs that have been available to our staff, from bearing technology, bearing care, use of intricate Laser alignment equipment and safety courses, has ensured that all our staff are fully trained in product knowledge, safety and OEM standards.

With our employees being kept at the fore front of our industry in both knowledge and skill, our vision for continuous improvement is evident, and we strive to be the best at what we do.



Our Employees are our Greatest Asset

Whyalla Hose & Fitting Services



Capabilities

- MRO of gearboxes/gear units including but not limited to:
 - Straight cut
 - Single Helical
 - Double Helical
 - Worm and Wheel
 - Bevel Helical
 - Cycloid
 - Planetary
- MRO of mechanical spares including but not limited to:
 - Hydraulic components (Cylinders, Pumps, Motors)
 - Pneumatic components (Cylinders, Motors, Winches)
 - Cardan Shafts
 - Small Tools (Hydraulic Jacks, Impact guns etc)
 - General mechanical works
- Pneumatics:
 - Schematic Design
 - Component selection & supply
 - Installation
 - Commissioning





Capabilities

- RYCO Hydraulic Hose:
 - Identification
 - Installation
 - Commissioning
 - Audits & Recommendations

- Workshop:
 - Hydraulic Hose manufacturing workshop
 - Hydraulic cylinder test bench
 - Strip & Report workshop
 - Rebuild workshop
 - Gearbox test bed
 - Lathe x 2 (Large: Max swing = 400mm , Length = 2000mm)
 - Milling Machine (With slotting capabilities)
 - Specialised tooling for the MRO of gearboxes/gear units

- Workforce:
 - Site Supervisor
 - Workshop Supervisor
 - Fitter & Turner Trades x 7
 - Apprentices x 2
 - Fully trained Hydraulic Hose Technicians x 4

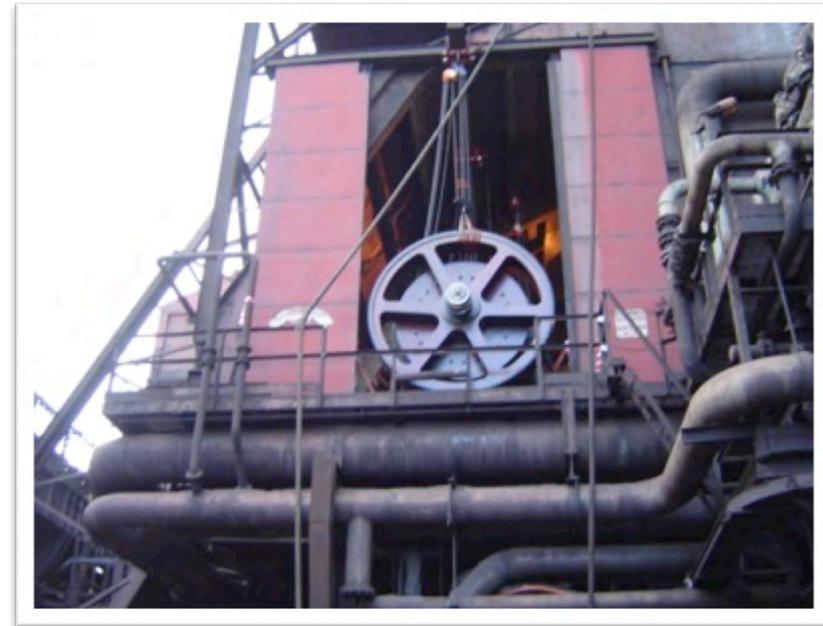


Whyalla Hose & Fitting Services



Capabilities

- Site Work, including but not limited to:
 - Laser Alignment
 - Gearbox removal/installations
 - Rotating equipment removal/installations
 - Fault finding on hydraulic & pneumatic systems
 - Pipework installations (Europress, double bunkered, galvanised etc)
 - Lubrication installations
 - Gas compressor overhauls (BOC Whyalla and ODO)
 - Onsite gearbox rebuilds
 - General hose installations
 - General labour hire
 - Audits (Gearboxes/gear units)
 - Audits (Hydraulic Hose applications)





WH&F Partnership - RYCO

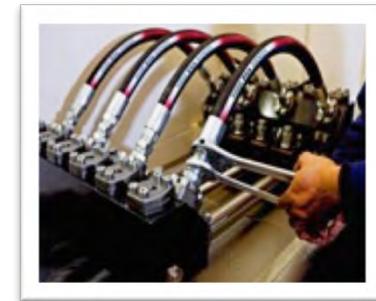
For the past 10 years, Whyalla Hose & Fitting Services have been an accredited supplier of RYCO Hydraulic Hose & Fittings. As RYCO's experience grows, so to does ours, ensuring we have access to the very latest innovations.

Working to ISO9001 standards, WH&F have the capabilities to service industry sectors that include: Oil & Gas, Steelmaking, Mining, Agricultural and Power Generation.

The RYCO Product excels in the above industry applications, providing solutions for cranes, forklifts, material handling equipment, earth moving equipment & refuge collection and compaction.

WH&F also provides RYCO 24•7 Call, Connect & Go, which offers a complete service for the replacement of hose, hose assemblies and fittings for all types of hydraulic systems.

The comprehensive range of quality RYCO products and extensive market coverage, ensures minimal downtime and reliable service every time.



Whyalla Hose & Fitting Services



WH&F Partnership - Applied Industrial Technologies

- As of 1st May 2015, Whyalla Hose & Fitting Services aligned themselves as a partner with Applied Industrial Technologies
- By aligning ourselves with major brands and suppliers, ensures our customers have access to a leading range of quality products and solutions to service their needs
- WH&F understand the demands of industry and do our very best to secure a competitive position in the market place
- WH&F believe that we must make ourselves a vital part of our customers' success. Strategic investments in our business systems enable us to meet our customers' most progressive needs, including but not limited to:
 - Urgent delivery needs
 - Order fulfillment accuracy
 - Product availability
 - Quality
 - On-time delivery



New Partnership in Whyalla

Garlock



REXNORD

FALK

LOCTITE



Koyo



Bendrol's ELECON



For all these brands and more please contact:

Whyalla Hose & Fitting Services
 130 Norrie Ave
 Whyalla SA 5600
 Ph:(08) 8645 8000
 After Hours: 0419 827 881
 Engineering@whyallahose.com.au

TIMKEN



RENOLD



DODGE

COOPER



FYH



Leverlink



Whyalla Hose & Fitting Services



WH&F Partnership - SKF

- Through our alignment with Applied Industrial Technologies, many doors have opened for WH&F. One in particular, an exciting partnership with SKF. As part of the SKF branding, WH&F have become a recognised 'Industrial Parts Supplier'. This provides us access to SKF Engineers and product experts, that will work in with WH&F and end user, by visiting site to assist with problem areas and oversee major projects
- Our access to online training for all our employees includes:
 - Laser Alignment
 - Bearing Technology
 - Condition Monitoring
 - Lubrication
 - Sealing Technology
- Our strategic vision with SKF is to obtain the SKF 'Certified Maintenance Partner'
- By becoming a SKF 'Certified Maintenance Partner', WH&F will be able to provide value added services to our customers by:
 - Improvements in Plant reliability
 - Reduced maintenance costs
 - Increased Plant productivity
 - Reduced overall cost of operation

Striving for Engineering Excellence



Whyalla Hose & Fitting Services



Other Major Suppliers

- Austrahose
 - Industrial Hose (Rubber, PVC, Thermoplastic)
 - Camlocks & fittings
 - Marine Hose
 - www.hose.net.au



- IMI Precision Engineering (Norgren Pneumatics)
 - Actuators
 - Air Preparation
 - Fittings
 - www.norgren.com.au



- Industrial Fitting Supplies (IFS)
 - Brass & Stainless Steel Fittings
 - Airline fittings
 - Valves
 - www.ifssa.com.au



- Specialised Force
 - Durapac - Hydraulic Cylinders
 - Durapac - Air Hydraulic Pumps
 - Hydraulic Press
 - www.specialisedforce.com.au



Whyalla Hose & Fitting Services



A Sample of our Clients

With access to over 80 suppliers and the experience of 21 years in business, Whyalla Hose & Fitting Services, provides sales and service to a large range of customers that include but are not limited to:

- OneSteel
- Arrium Mining
- BOC Whyalla
- BOC Olympic Dam
- Santos
- Nyrstar
- Alinta Energy
- Transfield Rail
- EDI Rail
- Bis Industries
- Boart Longyear
- Viterra
- CSL Shipping
- GWA
- Harsco



Whyalla Hose & Fitting Services



WH&F - Main Contacts

General Manager – Jarrod Starkey

- 26 Years Experience
- Grad. Cert of Management
- Diploma of Business
- Cert IV WH&S
- Cert IV FLM
- Cert III Engineering – Mechanical
- Pneumatics 1, 2 & 4
- Hydraulics 1, 2 & 3
- 18 years managerial experience



Mobile: 0477 799 906
jarrod@whyallahose.com.au

Maintenance & Sales Manager – Jake Fay

- 12 years experience
- Currently undertaking Cert IV WH&S
- Diploma of Business
- Cert III Engineering – Mechanical
- SKF trained in bearing technology
- SKF trained in laser alignment
- Pneumatics 1 & 2
- Hydraulics 1 & 2
- 6 years managerial experience



Mobile: 0448 865 306
jake@whyallahose.com.au

Maintenance Leading Hand – Andrew Richardson

- 10 years experience
- Currently undertaking Cert IV FLM
- Cert III Engineering – Mechanical
- SKF trained in bearing technology
- SKF trained in laser alignment
- Pneumatics 1
- Hydraulics 1, 3 & 4
- 2 years managerial experience



Mobile: 0414 401 901
andrewr@whyallahose.com.au

Whyalla Hose & Fitting Services



Our Mission

In today's competitive business environment, the requirements for suppliers and customers to work closely together are greater than ever before. At Whyalla Hose and Fitting Services we do more than simply supply a product; we understand that our success is dependent upon our customers' success.

Our mission is to be leaders in Engineering, distributors of quality components and provide high quality mechanical repairs, while ensuring that all personnel are adequately trained to perform their job, in a safe and professional manner.

WH&F is dynamic and dedicated! Our employees are experienced and reliable.

Thank you for taking the time to read our Company Profile. When choosing an engineering business, please keep us in mind.

Yours in Business

Jarrold Starkey
General Manager
Whyalla Hose & Fitting Services (Aust) Pty Ltd

Success is doing ordinary things extraordinarily well.

Whyalla Hose & Fitting Services